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# JIGAWA STATE AGRICULTURAL INVESTMENT PLAN 2024 -2030

ONYX ADVISORY LIMITED

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# 1 About Propcom+

Propcom+ is an eight-year (2023-2030), rural and agricultural market development programme supporting climate-resilient and sustainable agriculture and forestry that benefits people, climate and nature.

The programme aims to support 3.79 million people, 50% of whom will be women, to adopt and scale sustainable agricultural practices that increase productivity and climate resilience while reducing emissions and protecting natural ecosystems.

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# 2 Acknowledgements

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|---|---|
| Total Population: | Approximately 7.76 million (2023 projection). |
| Total Land Area: | 2.24 million ha. |
| Total Arable Land: | 1.9 million ha. |
| Total Cultivated Land: | 1.4 million hectares (rainy season). |
| Number of Farm Households: | Approximately 1.6 million households |
| Potential Irrigable Area: | 400,000 ha in FADAMA floodplain regions. |
| Current Area under Irrigation: | Approximately 100,000 hectares (derived from estimates of irrigation infrastructure coverage |
| Surface Water Availability: | Hadejia River system, major dams including Hadejia Valley Irrigation Project (HVIP), |
| Annual Rainfall Range: | 3-5 months of rainfall annually, averaging 500–1,000 mm depending on the region. |
| Underground Water Availability: | Shallow groundwater levels across the state suitable for irrigation. |
| Agricultural Contribution to GDP: | Approximately 60% to the state's GDP. |
| Agricultural Workforce: | Nearly 90% of the population |
| Tractor Density: | Very low, approximately 0.27 tractors per 1,000 hectares (based on national and regional averages). |
| Fertilizer Usage | 13 kg/ha (based on national and regional averages). |

# 4 Acronyms

| Acronym | Full Meaning |
|---|---|
| **AfCFTA** | African Continental Free Trade Area |
| **AfDB** | African Development Bank |
| **ADP** | Agricultural Development Programs |
| **CASP** | Climate Adaptation and Smart Agriculture Program |
| **CDF** | Comprehensive Development Framework |
| **CDF III** | Comprehensive Development Framework (Third Edition) |
| **EPZ** | Export Processing Zone |
| **FGN** | Federal Government of Nigeria |
| **FBO** | Farmer-Based Organization |
| **FAO** | Food and Agriculture Organization |
| **GAP** | Good Agronomic Practices |
| **GIS** | Geographic Information Systems |
| **HVIP** | Hadejia Valley Irrigation Project |
| **IFAD** | International Fund for Agricultural Development |
| **JARDA** | Jigawa Agricultural and Rural Development Authority |
| **JSAIP** | Jigawa State Agricultural Investment Plan |
| **JSAP** | Jigawa State Agricultural Policy |
| **LGA** | Local Government Area |
| **L-PRES** | Livelihood Promotion and Resilience Support |
| **M&E** | Monitoring and Evaluation |
| **NAERLS** | National Agricultural Extension and Research Liaison Services |
| **NAIP** | National Agricultural Investment Plan |
| **NBS** | National Bureau of Statistics |
| **NDP** | National Development Plan |
| **NLTP** | National Livestock Transformation Plan |
| **NIRSAL** | Nigeria Incentive-Based Risk Sharing System for Agricultural Lending |
| **NSHCD** | National Strategy for Human Capital Development |
| **PPP** | Public-Private Partnership |
| **ROI** | Return on Investment |
| **SAPZ** | Special Agro-Industrial Processing Zones |
| **SDGs** | Sustainable Development Goals |
| **SWG** | Sectoral Working Group |
| **TIU** | Technical Implementation Unit |
| **UNDP** | United Nations Development Programme |
| **USAID** | United States Agency for International Development |
| **J-CARES** | Jigawa CARES Program (Social and Economic Resilience Program) |
| **LARF** | Land Acquisition and Resettlement Framework |
| **JSAIPA** | Jigawa State Agricultural Investment Program Areas |

# 5 Executive Summary

Jigawa State's agricultural sector is the cornerstone of its economy, contributing over 60% to the state's Gross Domestic Product (GDP) and providing livelihoods for nearly 90% of its population (Jigawa State Agricultural Policy, 2024). This sector includes crop cultivation, livestock rearing, and agro-processing, which are vital for ensuring food security, driving economic growth, and creating employment opportunities. Recognizing the transformative potential of agriculture to uplift the state's economy, address poverty, and promote economic diversification, the Jigawa State Agricultural Investment Plan (JSAIP) has been designed as a comprehensive strategy for the period 2024–2030.

The JSAIP leverages Jigawa's agricultural strengths, which include 1.9 million hectares of arable land, of which 1.4 million hectares are cultivated during the rainy season (Jigawa State Agricultural Policy, 2024). Additionally, the state benefits from diverse agro-ecological zones—Guinea Savannah, Sudan Savannah, and Sahel Savannah—that support a range of crops, including rice, millet, sesame, and wheat, as well as livestock and fisheries (Jigawa State Agricultural Policy, 2024). Jigawa's geographical position, bordering the Republic of Niger, offers significant potential for cross-border trade and export of agricultural products. Furthermore, its youthful demographic, with approximately 60% of the population under 25 years old, provides a vibrant workforce capable of driving agricultural innovation and productivity[1]

The JSAIP is strategically designed to position Jigawa as Nigeria's premier destination for agro-industrial investments. It emphasizes creating an enabling environment for private-sector participation, fostering public-private partnerships, and advancing value chain development. Specific priorities include expanding irrigation infrastructure, enhancing mechanization, and promoting climate-smart agricultural practices to build resilience against climate change impacts. The plan also seeks to enhance access to affordable financing for smallholder farmers and agribusinesses, which remains a critical barrier to growth[2]

Moreover, the JSAIP integrates a robust focus on value addition, with an emphasis on developing processing facilities for key crops like rice, sesame, and sugarcane. By strengthening market access and export potential through facilities like the Maigatari Export Processing Zone, the plan aims to unlock the full economic benefits of agriculture. These initiatives align with Jigawa's long-term vision of becoming a globally competitive, inclusive, and sustainable hub for agribusiness, ensuring food security, economic diversification, and poverty alleviation[3] .

[1] Jigawa Comprehensive Development Framework, 2024. Jigawa Comprehensive Development Framework III (CDF III). Jigawa State Government.
[2] Jigawa Comprehensive Development Framework, 2024. Jigawa Comprehensive Development Framework III (CDF III). Jigawa State Government.
[3] Jigawa State Agricultural Policy, 2024. The Jigawa State Agriculture Policy (2024–2030). Jigawa State Ministry of Agriculture and Natural Resources

With its actionable roadmap, well-defined objectives, and a results-based monitoring framework, the JSAIP provides a comprehensive pathway for sustainable agricultural growth in Jigawa State. It is expected to catalyze agricultural transformation, contributing to national development goals and positioning Jigawa as a leader in agricultural innovation and investment within Nigeria and the West African region

## 5.1 Introduction

Agriculture is the foundation of Jigawa State's economy, playing a pivotal role in its development by contributing significantly to the state's Gross Domestic Product (GDP) and providing livelihoods for nearly 90% of the population. As the primary source of employment and food security, the agricultural sector in Jigawa serves as a critical driver of economic activity and social stability. With its strategic location in northern Nigeria and its proximity to the Republic of Niger, Jigawa is uniquely positioned to leverage regional trade opportunities, further enhancing its agricultural potential.

The state is endowed with vast agricultural resources, including approximately 1.9 million hectares of arable land, of which 1.4 million hectares are cultivated during the rainy season. Its diverse agro-ecological zones—Guinea Savannah, Sudan Savannah, and Sahel Savannah—support a variety of crops, including millet, sorghum, rice, sesame, wheat, and hibiscus, alongside livestock production. Additionally, abundant water resources, such as the Hadejia River system and major irrigation projects like the Hadejia Valley Irrigation Project (HVIP), provide critical support for agricultural productivity and year-round farming through irrigation systems. Jigawa's favorable climate, characterized by 3–5 months of rainfall and sub-tropical conditions, further enhances its suitability for agriculture and agro-industrial development.

Despite these strengths, the sector faces significant challenges that limit its ability to achieve its full potential. Low mechanization remains a pressing issue, with many smallholder farmers relying on manual labor and traditional farming tools. This not only reduces efficiency but also discourages youth participation in agriculture. Limited access to quality inputs, such as fertilizers, improved seeds, and agrochemicals, coupled with poor input distribution systems, exacerbates the productivity gap. Climate change impacts, including erratic rainfall patterns, desertification, and flooding, pose additional threats, particularly to vulnerable smallholder farmers who lack the resources to adapt. Furthermore, inadequate storage facilities and post-harvest losses continue to undermine the economic viability of agricultural production.

Recognizing the need for a transformative approach, the Jigawa State Agricultural Investment Plan (JSAIP) was developed as a strategic framework for 2024–2030. Aligned with the state's 12-Point Agenda, the JSAIP focuses on addressing these challenges while leveraging Jigawa's agricultural strengths to ensure food security, create jobs, promote private-sector engagement, and enhance climate resilience. By

integrating climate-smart agricultural practices and fostering partnerships with private investors, the plan aims to modernize the agricultural sector, transitioning it from subsistence to commercial farming.

Under the JSAIP, priorities include expanding irrigation infrastructure, improving access to mechanization through subsidized equipment, and scaling up climate-resilient practices such as conservation agriculture and agroforestry. The plan also emphasizes the development of value chains to boost agro-processing and market access for key crops and livestock products. These efforts aim to position Jigawa as a hub for agro-industrial investments, unlocking its potential for domestic and export markets while fostering inclusive growth.

The JSAIP's alignment with Jigawa's broader development framework underscores its commitment to transforming agriculture into a sustainable and competitive sector that drives economic diversification, poverty reduction, and food security. The plan seeks to ensure that agriculture continues to serve as the backbone of Jigawa's economy while addressing the challenges that have historically constrained its growth through targeted interventions and a robust implementation framework.

## 5.2 Performance of the Agricultural Sector

***The agricultural sector in Jigawa State has experienced significant progress over the past decade, driven by government initiatives, private-sector involvement, and development partner support. This progress is evident in key areas such as production growth, irrigation expansion, value chain development, and market access, which have contributed to improved food security, economic diversification, and employment opportunities.***

**Increased Production**
Key agricultural commodities such as rice, sesame, and hibiscus have witnessed substantial production increases in recent years. Rice production in the state has exceeded 600,000 metric tons annually, bolstered by improved access to inputs, expansion of irrigation infrastructure, and adoption of better agronomic practices (Jigawa State Agricultural Policy, 2024). Similarly, sesame production has increased to 138,000 metric tons annually, driven by both local demand and export opportunities, while hibiscus has become a priority cash crop for farmers due to its profitability in international markets (JARDA, 2024).

**Expansion in Irrigation**
The development and rehabilitation of major irrigation infrastructure, such as the Hadejia Valley Irrigation Project (HVIP), have significantly enhanced dry-season farming, enabling year-round agricultural activities. The HVIP and

**Value Chain Development**
Jigawa State has prioritized value chain development as part of its agricultural transformation agenda. The establishment of agro-processing facilities for key crops, such as rice mills, sesame cleaning factories, and

associated dams, including the Warwade and Kafin Gana Dams, now provide water for irrigating over 100,000 hectares of farmland, benefiting thousands of farming households and increasing productivity (Jigawa Comprehensive Development Framework, 2024). These projects have been instrumental in mitigating the adverse effects of erratic rainfall and climate change, ensuring stable crop production throughout the year.

sugarcane processing plants, has significantly bolstered local economies and created employment opportunities. For instance, the ongoing construction of the Dangote Rice Mill in Kaugama Local Government Area is expected to process over 500,000 tons of rice annually, contributing to job creation and value addition (InvestJigawa, 2024). Furthermore, cottage industries focused on groundnut oil extraction and cereal milling have also emerged, enhancing the economic viability of smallholder farming.

**Market Access**

Jigawa's strategic location, bordering the Republic of Niger and lying close to export corridors, has facilitated the growth of agricultural exports. The Maigatari Export Processing Zone (EPZ) has been a key enabler, allowing agricultural products to reach international markets, particularly Europe and Asia. Export-oriented crops, including sesame, hibiscus, and processed rice, have benefitted from improved trade logistics and reduced transaction costs within the EPZ framework (Jigawa State Agricultural Policy, 2024). Additionally, public-private partnerships have strengthened supply chains, enabling farmers to access larger markets and receive better prices for their produce.

**Challenges Persist**

Despite these achievements, several challenges continue to hinder the full realization of Jigawa State's agricultural potential:

- Low Mechanization: The agricultural sector remains largely dependent on manual labor, with tractor density estimated at only 0.27 tractors per 1,000 hectares, far below the national average (JARDA, 2024).
- Climate Change Impacts: Erratic rainfall patterns, flooding, and desertification pose significant risks to agricultural productivity and sustainability.
- Limited Financial Access: Smallholder farmers face difficulties in securing affordable credit due to high interest rates and stringent lending requirements.
- Post-Harvest Losses: Inadequate storage facilities and poor handling practices result in significant losses, particularly for perishable commodities such as fruits and vegetables.
- Infrastructure Gaps: Poor rural road networks and inadequate electricity supply limit farmers' access to markets and agro-processing facilities.

## 5.3 Challenges of the Agricultural Sector

The agricultural sector in Jigawa State, while demonstrating significant potential and progress, faces numerous challenges that limit its ability to achieve full productivity

and sustainability. These challenges include low mechanization, climate change impacts, post-harvest losses, limited access to financing, weak value chains, and conflicts between resource users. Addressing these issues is critical to transforming the sector into a sustainable driver of economic growth and food security.

- The level of mechanization in Jigawa State remains critically low, with an estimated tractor density of just 1 tractor per 5,000 hectares. This figure is far below the global standard of 1 tractor per 400 hectares, leaving the majority of farmers reliant on labour-intensive practices[4]. The limited availability and high cost of tractors and other machinery deter smallholder farmers from adopting mechanized farming methods. Consequently, productivity remains low, and the sector struggles to attract younger generations who perceive agriculture as burdensome and unprofitable.
- Jigawa's agricultural sector is increasingly vulnerable to the adverse effects of climate change, including erratic rainfall, desertification, and frequent flooding. These climatic shifts have disrupted planting and harvesting cycles, reduced crop yields, and exacerbated food insecurity in the state. Flooding has particularly affected areas along the Hadejia River, destroying farmlands and displacing farming communities. Without adequate adaptation measures, such as improved irrigation infrastructure and climate-smart agricultural practices, these impacts are expected to intensify, further undermining agricultural productivity.
- Post-harvest losses remain a significant challenge in Jigawa State, particularly for perishable crops such as tomatoes, peppers, and fruits. Inadequate storage facilities, such as cold chains and silos, result in spoilage and waste, leading to financial losses for farmers and reducing the availability of food in local markets. For instance, up to 30% of harvested produce is lost annually due to poor handling and lack of processing facilities. These losses not only hinder farmer incomes but also limit the state's ability to meet export standards and compete in regional and international markets.
- Access to affordable credit remains a critical barrier for smallholder farmers in Jigawa. Farmers often face stringent lending requirements, high interest rates, and limited financial literacy, which restrict their ability to invest in inputs such as improved seeds, fertilizers, and equipment. While microfinance institutions and cooperatives provide some financial support, these options are often inadequate to meet the needs of a sector dominated by smallholders. The lack of financial inclusion also limits opportunities for agribusiness expansion and innovation.
- The agricultural value chain in Jigawa is underdeveloped, with insufficient integration across production, processing, and marketing activities. Many

[4] Jigawa State Agricultural Policy, 2024. The Jigawa State Agriculture Policy (2024–2030). Jigawa State Ministry of Agriculture and Natural Resources.

farmers operate in isolation, with limited access to aggregation centers, processing facilities, and organized markets. This fragmentation reduces competitiveness and leads to inefficiencies in the supply chain. For example, the absence of robust market linkages forces many farmers to sell their produce at low prices to middlemen, missing opportunities to capture greater value.

- Resource-based disputes between farmers and herders pose a significant threat to agricultural productivity and rural livelihoods. Competition over land and water resources has intensified in recent years due to population growth, climate change, and shrinking grazing lands. These conflicts often result in the destruction of crops, loss of livestock, and displacement of communities, further destabilizing the agricultural sector. While efforts such as grazing reserves and conflict resolution mechanisms have been initiated, more comprehensive strategies are needed to address these recurring issues.

## 5.4 Objectives of the JSAIP and its formulation process

The Jigawa State Agricultural Investment Plan (JSAIP) is a comprehensive framework designed to transform the state's agricultural sector into a globally competitive and sustainable driver of economic growth. The objectives of the JSAIP align with Jigawa State's broader development goals under the 12-Point Agenda, focusing on food security, economic diversification, and inclusive growth. The plan seeks to leverage the state's vast agricultural potential, address systemic challenges, and position Jigawa as Nigeria's hub for agro-industrial investment.

### 5.4.1 Objectives of the JSAIP

A key priority of the JSAIP is to ensure food security by increasing agricultural productivity and reducing post-harvest losses. This involves scaling up the production of key crops such as rice, millet, sesame, and wheat, while also addressing systemic issues such as inadequate storage and poor post-harvest handling. By promoting improved seed varieties, mechanization, and efficient supply chains, the plan aims to reduce food insecurity, enhance household nutrition, and contribute to national food self-sufficiency.

The JSAIP emphasizes the importance of value-added processing to enhance the profitability of agricultural activities and expand export-oriented production. The establishment of agro-processing clusters, such as rice mills, sesame cleaning facilities, and sugarcane processing plants, will create jobs, reduce post-harvest losses, and stimulate economic growth. Investments in infrastructure like the Maigatari Export Processing Zone (EPZ) will provide the foundation for export-driven growth, boosting the competitiveness of Jigawa's agricultural products in international markets.

The plan prioritizes the inclusion of marginalized groups, particularly women and youth, in agricultural development. This involves providing targeted training programs, access to finance, and incentives for youth- and women-led agribusinesses. By integrating digital tools and vocational programs, the JSAIP seeks to attract the younger population to agriculture and address the gender gap in access to agricultural resources and decision-making.

Recognizing the increasing impacts of climate change, the JSAIP incorporates climate-smart agricultural practices to build resilience across value chains. Key strategies include promoting conservation agriculture, agroforestry, and efficient water management systems. The plan also supports the adoption of renewable energy solutions, such as solar-powered irrigation, to reduce the environmental footprint of agricultural activities while improving productivity.

### 5.4.2 The Formulation Process

The formulation of the JSAIP was a participatory and evidence-based process involving consultations with diverse stakeholders, reviews of existing policies, and integration of global best practices. The process was designed to ensure that the plan addresses both local needs and broader national and international priorities.

The development of the JSAIP involved extensive consultations with key stakeholders, including farmers, private investors, development partners, and government agencies. Focus group discussions, policy analysis workshops, and individual interviews were conducted to capture the perspectives of smallholder farmers, large-scale producers, and processors. These consultations highlighted critical challenges, opportunities, and priorities for transforming the agricultural sector.

A thorough review of previous policies, including the 2016 Jigawa State Agricultural Policy and the Comprehensive Development Framework III, informed the JSAIP's design. These reviews identified gaps in implementation, lessons learned, and opportunities for scaling successful initiatives. The inclusion of recommendations from the National Agricultural Transformation Agenda ensured that the plan aligns with broader federal objectives.

The JSAIP incorporates international best practices and aligns with global frameworks such as the United Nations Sustainable Development Goals (SDGs) and the African Union's Agenda 2063. These frameworks emphasize food security, gender equality, climate resilience, and inclusive economic growth as central pillars for agricultural development. The integration of these principles positions Jigawa State as a forward-thinking player in the global agricultural landscape (Jigawa Comprehensive Development Framework, 2024).

The formulation process relied heavily on data and evidence to ensure that the JSAIP is actionable and measurable. A robust results framework was developed to track

progress against specific, measurable, achievable, relevant, and time-bound (SMART) goals. This ensures accountability and provides a basis for adaptive management throughout the implementation period (InvestJigawa, 2024).

By combining participatory engagement, policy alignment, and evidence-based planning, the JSAIP offers a transformative vision for Jigawa's agricultural sector, fostering sustainability, inclusiveness, and competitiveness.

## 5.5 Government's Investment Priorities

*The Jigawa State Government has outlined key investment priorities to transform its agricultural sector into a driver of sustainable economic growth and food security. These priorities address systemic challenges, build resilience, and create opportunities for inclusive and market-driven growth. By focusing on infrastructure development, value chain enhancement, climate adaptation, capacity building, and improved market access, the government aims to modernize the sector and attract significant domestic and international investments.*

### 5.5.1 Value Chain Enhancement

The government recognizes the importance of strengthening agricultural value chains to maximize the economic potential of key crops.

- Investment in Processing Plants: Establishing and expanding agro-processing facilities for crops such as rice, sesame, wheat, and hibiscus is a top priority. For example, the Dangote Rice Mill in Kaugama Local Government Area, once completed, will process 500,000 tons of rice annually, creating jobs and increasing value addition (Jigawa State Agricultural Policy, 2024).

- Promoting Private Sector Participation: Public-private partnerships (PPPs) are being encouraged to attract investors in processing plants, packaging units, and value-added industries. These partnerships will foster innovation, efficiency, and competitiveness in agricultural production and processing.

### 5.5.2 Infrastructure Development

A central focus of the government's agricultural investment strategy is the development of critical infrastructure to support year-round farming and reduce post-harvest losses. Key initiatives include:

### 5.5.3 Climate Adaptation

To address the growing impacts of climate change, Jigawa State has launched several initiatives aimed at building resilience and promoting sustainable agricultural practices.

- Expansion of Irrigation Systems: Major projects, such as the Hadejia Valley Irrigation Project (HVIP), have been prioritized to ensure reliable water supply for dry-season farming. The government plans to rehabilitate existing dams and canals and construct new irrigation facilities to increase the irrigated area from the current 100,000 hectares to over 150,000 hectares by 2030.

- Construction of Storage Facilities: Investments in silos, warehouses, and cold storage units are critical to reducing post-harvest losses, particularly for perishable crops like tomatoes, fruits, and vegetables. These facilities will help farmers maintain the quality of their produce and access better markets.

- Road Network Development: Rural road projects aim to improve connectivity between farming communities, processing facilities, and markets. Enhanced road networks will reduce transportation costs and increase access to local and international trade hubs, such as the Maigatari Export Processing Zone.

- Water Conservation: Projects focused on efficient water use, such as drip irrigation systems and improved drainage networks, are being implemented to combat water scarcity and reduce the risk of flooding.
- Reforestation Initiatives: The government has planted over 12 million tree seedlings since 2015 to combat desertification, increase forest cover, and mitigate soil erosion (Jigawa Comprehensive Development Framework, 2024).
- Renewable Energy Solutions: Solar-powered irrigation systems and energy-efficient technologies are being introduced to support sustainable farming practices. The state is also collaborating with private investors to establish solar farms that will generate electricity for agricultural and industrial activities (InvestJigawa, 2024).

### 5.5.4 Market Access

Improving access to local, regional, and international markets is a key pillar of the government's strategy to enhance profitability for farmers and agribusinesses.

- Strengthening the Maigatari Export Processing Zone (EPZ): The Maigatari EPZ is being expanded to include additional warehouses, processing plants, and trade facilities. This zone serves as a vital hub for export-oriented activities, particularly for crops such as sesame and hibiscus, which are in high demand in Europe and Asia (InvestJigawa, 2024).
- Regional Trade Hubs: The government is investing in market infrastructure to improve logistics and reduce transaction costs for agricultural exports. Initiatives include establishing aggregation centers for crop collection and enhancing the capacity of border trade facilities to boost cross-border commerce with neighboring Niger Republic and other West African countries (Jigawa Comprehensive Development Framework, 2024).

### 5.5.5 Capacity Building

Capacity building for farmers is a cornerstone of the government's investment priorities. Training programs are being conducted to equip farmers with modern agricultural techniques and technologies to improve productivity and sustainability.

- Extension Services: The government has recruited 1,000 extension workers to provide technical support to farmers on improved farming methods, soil management, and pest control (JARDA, 2024).
- Digital Agriculture: Farmers are being trained on the use of digital tools, such as mobile platforms for weather updates, market information, and financial services. These innovations are improving decision-making and fostering greater efficiency in agricultural operations (Jigawa State Agricultural Policy, 2024).

## 5.6 Resource mobilization and financing for JSAIP for implementation

The implementation of the Jigawa State Agricultural Investment Plan (JSAIP) requires a multi-pronged approach to resource mobilization, targeting public, private, and donor funding sources to support the estimated NGN 166.33 billion budget for 2024–2030. The plan prioritizes key areas such as irrigation expansion, value chain development, climate-smart agriculture, and renewable energy integration. Public-private partnerships (PPPs) are central to the strategy, attracting private investment in projects like the Hibiscus Processing Plant (NGN 7.2 billion) and Sesame Oil Extraction Plant (NGN 5.9 billion), which are projected to generate jobs and boost export earnings. Additionally, international donors, including the World Bank, African Development Bank (AfDB), and USAID, will provide funding and technical assistance for critical projects such as rice value chain development, with NGN 10.07 billion already allocated. Innovative financing mechanisms, such as green bonds and social

impact bonds, will further support climate-smart initiatives, while partnerships with microfinance institutions will expand access to affordable credit for smallholder farmers, particularly youth and women.

The financing framework aligns with short-, mid-, and long-term objectives to ensure effective implementation and sustainability. In the short term (2024–2027), foundational investments will focus on irrigation systems, renewable energy, and agro-processing facilities. The mid-term (2028–2029) will scale up value chain projects and expand PPPs, while the long term (2030) will consolidate gains by enhancing government revenues through export duties and industrial clusters like the Maigatari Export Processing Zone (EPZ). With NGN 13.44 billion earmarked for irrigation rehabilitation and NGN 8.4 billion for groundwater-based micro-irrigation, the plan targets improved productivity and reduced operational costs. By leveraging NGN 500 billion in investments and increasing state agricultural budget allocations to 15% by 2030, the JSAIP will create a sustainable, inclusive, and competitive agricultural sector capable of driving Jigawa's economic transformation.

## 5.7 Implementation framework and monitoring and evaluation (M&E)

The implementation framework for the Jigawa State Agricultural Investment Plan (JSAIP) is designed to ensure the seamless execution of its strategic objectives while fostering accountability, inclusiveness, and efficiency. The framework outlines a collaborative governance structure, integrating the efforts of government agencies, private sector stakeholders, development partners, and local communities. Key institutions, including the Jigawa State Ministry of Agriculture and Natural Resources, the Jigawa Agricultural and Rural Development Authority (JARDA), and InvestJigawa, the state's investment promotion agency, play pivotal roles in the execution and oversight of the plan.

# 6 The Jigawa Agricultural Investment Plan

## 6.1 Background

Agriculture is the backbone of Jigawa State's economy, contributing approximately 60% to its GDP and employing nearly 90% of its workforce. The state leads Nigeria in the production of crops such as dates, hibiscus, gum Arabic, and sesame and demonstrates substantial competitiveness in rice, wheat, peanuts, soybeans, sugarcane, and tomatoes. Despite these strengths, Jigawa's agricultural sector faces critical challenges, including inadequate infrastructure, outdated farming practices, and underdeveloped value chains, which hinder its full potential. To address these gaps and leverage the state's comparative advantages, Jigawa has developed the Jigawa State Agricultural Investment Plan (JSAIP), a strategic framework designed to modernize the agricultural sector and drive sustainable economic growth.

The JSAIP builds on Nigeria's commitment to the CAADP process, which emphasizes agriculture-led growth for poverty reduction and food security across member states of ECOWAS. In Nigeria, the National Agricultural Investment Plan (NAIP) provided the foundation for subnational strategies such as the JSAIP. Aligned with Jigawa's 12-Point Agenda, the 2016 Agricultural Policy, and national goals like the Nigeria Agricultural Transformation Agenda (ATA), the JSAIP focuses on addressing every component of the agricultural value chain, from production to marketing. The plan emphasizes private-sector-led growth, where the government sets the direction and facilitates execution through collaboration with private investors, donor agencies, and development partners. It integrates the latest global best practices, including climate-smart agriculture, value chain development, and infrastructure provision at each stage, to foster a modern, market-oriented, and inclusive agricultural sector in Jigawa.

## 6.2 Purpose of the JSAIP

The purpose of the Jigawa State Agricultural Investment Plan (JSAIP) is to provide a strategic and actionable roadmap for transforming Jigawa's agricultural sector into a modern, sustainable, and inclusive industry. The plan seeks to leverage the state's natural endowments, human resources, and geographic advantages to achieve food security, economic diversification, and poverty reduction. By addressing key bottlenecks such as infrastructure gaps, low productivity, and weak value chains, the JSAIP sets the foundation for agricultural growth that is both environmentally sustainable and economically impactful.

Specific Objectives:

- Investment Mobilization: Attract and mobilize private-sector investments aligned with priority agricultural value chains such as sesame, rice, hibiscus, and wheat.
- Climate Resilience: Promote climate-smart agricultural practices to enhance productivity, reduce vulnerability, and ensure environmental sustainability.
- Value Addition: Stimulate agro-industrialization and value addition to create jobs, enhance competitiveness, and expand market opportunities.
- Inclusion and Empowerment: Support youth and women's empowerment through targeted training, financing, and participation in the agricultural value chain.
- Institutional Strengthening: Build capacity, improve infrastructure, and strengthen policy frameworks to create an enabling environment for agricultural transformation.

### 6.2.1 Process of developing the JSAIP

The development of the Jigawa State Agricultural Investment Plan (JSAIP) was a participatory, inclusive, and data-driven process designed to ensure that the plan reflects the unique priorities and opportunities within Jigawa's agricultural sector. The process incorporated input from a wide range of stakeholders, including farmers,

private-sector actors, government agencies, and development partners, to create a shared vision for agricultural transformation.

Key Steps in the Process:

- Stakeholder Engagement: Consultations were held with farmer groups, private investors, development partners, and local government representatives to gather diverse perspectives and build consensus.
- Comprehensive Situation Analysis: The agricultural landscape of Jigawa was thoroughly assessed, focusing on value chain performance, infrastructure gaps, market opportunities, and environmental factors. This analysis informed the identification of high-priority interventions.
- Expert Contributions: Contributions from multidisciplinary experts across fields such as agribusiness, climate-smart agriculture, irrigation, and investment promotion enriched the plan with innovative solutions and strategies.
- Policy and Strategic Alignment: The JSAIP was aligned with the 2024–2030 Jigawa Agricultural Policy, the National Vision 20:2020, and the Nigeria Agricultural Transformation Agenda to ensure coherence and compatibility with state and national goals.
- Data-Driven Planning: Evidence from stakeholder inputs, field studies, and previous agricultural plans was synthesized to design the plan's strategies, targets, and resource allocation frameworks.
- Drafting and Validation: A draft of the JSAIP was reviewed during stakeholder forums to validate findings and ensure that the recommendations addressed real-world challenges and opportunities.
- Finalization: Feedback from validation processes was incorporated into the final plan, resulting in a robust and actionable roadmap for agricultural investment and development.

### 6.3 Vision and Goals

The vision of the JSAIP is to achieve sustainable agri-business based economic growth in Jigawa State. The goal being food security, job creation and strengthen private sector participation in agricultural investments within the State.

## 7 Context and Situation Analysis

### 7.1 Economic situation in Jigawa State

Located in the northwestern region of Nigeria, Jigawa State is predominantly agrarian, with agriculture serving as the backbone of its economy. The state has made significant strides in leveraging its natural and human resources to foster economic growth and improve livelihoods. The state benefits from a favourable climate and fertile land, facilitating the cultivation of diverse crops such as rice, millet, sorghum,

maize, groundnuts, and vegetables. Both rain-fed and irrigated agriculture are practiced, with projects like the Hadejia Valley Irrigation Project supporting crop production, especially during dry seasons.

Jigawa State is a leading rice-producing state in Nigeria, with extensive cultivation areas and ambitious expansion plans. Government interventions, including improved seed varieties, credit access, and irrigation infrastructure rehabilitation, aim to boost rice production. Sorghum and Millet are staples in Jigawa and are extensively cultivated by smallholder farmers. Maize and Groundnuts are significant contributors to the state's agricultural output. Hibiscus, Sesame and Wheat are increasingly becoming recognised as priority cash crops for Jigawa State.

Jigawa State has established itself as a leading destination for businesses, thanks to its progressive and business-friendly regulatory environment. Ranked 2nd in the 2023 World Bank Subnational Ease of Doing Business (EoDB) report, the state excelled across key indicators such as Starting a Business, Registering Property, Enforcing Contracts, and Dealing with Construction Permits. This recognition, part of the second EoDB survey by the Presidential Enabling Business Environment Council, underscores Jigawa's commitment to streamlined processes and investor satisfaction. Additionally, Jigawa's peaceful environment, marked by low crime rates and minimal communal tensions, further enhances its appeal to both local and international investors.

Jigawa State's population has grown significantly from over 4.3 million in 2006 to an estimated 7.76 million in 2023, with a 3.5% annual growth rate. Nearly 60% of the population is aged 0-19, highlighting a youthful demographic. This presents both opportunities and challenges for development, particularly in agriculture.

Empowering youth is critical to harnessing their potential for agricultural transformation. Strategies include vocational training in modern agricultural practices, fostering innovation, and promoting entrepreneurship. The government's employment of over 1,000 young agro-extension workers demonstrates a commitment to reducing unemployment, improving farming practices, and boosting productivity. Youth-focused initiatives will ensure their active participation in driving growth, innovation, and sustainability in Jigawa's agricultural sector.

However, the economic situation of the state remains shaped by both opportunities and challenges that require strategic planning and investment to unlock its full potential. Jigawa State faces a number of challenges that impact agricultural productivity, with climate change being a significant concern. Erratic rainfall patterns, flooding, and rising temperatures are recurring issues that disrupt farming activities. To mitigate these impacts, adopting climate-smart practices such as water conservation and crop diversification is essential.

## 7.2 Agricultural Challenges

### 7.2.1 Barriers to agricultural trade and farmers' linkages to markets within Jigawa

Agricultural trade in Jigawa State faces several bottlenecks, hindering farmers' ability to access profitable markets and maximize their earnings. One of the primary challenges is the lack of well-established value chains that connect smallholder farmers to buyers, processors, and exporters. This disconnect results in limited market access, leaving farmers at the mercy of local traders who often exploit them by offering below-market prices for their produce. Additionally, logistical inefficiencies, such as poor/inefficient road networks and insufficient transportation options, increase the cost of moving goods to markets. Farmers also struggle with inadequate market infrastructure, including the absence of functional storage facilities, aggregation centres, and modern marketplaces, which exacerbate post-harvest losses and reduce product quality. Collectively, these barriers constrain farmers' economic potential and discourage investment in the agricultural sector.

### 7.2.2 Climate change, poor infrastructure, and limited access to modern farming technologies

The impact of climate change poses a threat to Jigawa's agricultural productivity. Erratic rainfall patterns, rising temperatures, and recurrent flooding disrupt planting cycles and reduce crop yields along some corridors. These adverse conditions are further aggravated by insufficient infrastructure to mitigate climate risks, such as irrigation systems and water conservation facilities. Farmers also lack access to modern farming technologies and inputs like quality seeds, fertilizers, and mechanized equipment, which limits their ability to adopt climate-smart agricultural practices and achieve higher productivity. The absence of renewable energy solutions for powering processing and storage facilities further compounds these challenges, particularly in rural areas. Without improved infrastructure and access to modern technologies, Jigawa's farmers remain vulnerable to environmental shocks, perpetuating low productivity and income instability.

### 7.2.3 Major Constraints to Jigawa State Agricultural Development

Post-harvest losses is a critical issue, particularly for perishable commodities such as fruits and vegetables, due to inadequate storage and preservation infrastructure. The agricultural sector also suffers from insufficient financial support, with many farmers unable to access affordable credit or insurance products to invest in their farms or protect against losses. Furthermore, pest and disease outbreaks remain a persistent threat, exacerbated by limited extension services and inadequate training for farmers on pest management and disease control. Despite government initiatives, the sector still faces challenges in fostering youth and women participation, which are critical to ensuring a vibrant and inclusive agricultural economy.

Although efforts to engage youth and women in agriculture through training, access to finance, and technology adoption are underway, there remains significant room for improvement. A more robust focus on inclusivity can further drive Jigawa's agricultural transformation and enhance its contribution to the state's overall economic growth.

Nevertheless, the development of industry and commerce in the state has faced significant obstacles, including a lack of capital funding, inadequate infrastructure, the impacts of climate change, and high energy costs. Addressing these constraints is vital for unlocking Jigawa's agricultural potential and driving sustainable economic growth.

## 7.3 Opportunities

Over the years, agriculture has remained the cornerstone of Jigawa State's economy, significantly contributing to its overall economic output. Approximately 85% of the population relies on agriculture as their primary source of livelihood, indicating the sector's vital role in the community's sustainability and growth. While most agricultural production in the state is still subsistence-based, heavily dependent on seasonal rainfall, the methods employed tend to be labour-intensive, with limited mechanization. Agricultural practices in Jigawa State are characterized by low productivity, as evidenced by the yields per hectare, high levels of labour intensity, and significant post-harvest losses. Despite these challenges, Jigawa State possesses the potential to support a diverse range of industries utilizing its abundant agricultural and mineral resources. However, many of these opportunities have yet to be fully explored and harnessed.

### 7.3.1 Main agricultural commodity categories in Jigawa State

Jigawa is an agrarian state blessed with large expanse of agricultural lands suitable for crops,

livestock and fish production. Out of the 2.24 million hectares total land area of the state, about 1.4 million hectares are estimated to be cultivable during the rainy season. The main agricultural commodity categories in Jigawa State can be broadly categorized into the following:

| Category | Major Components |
|---|---|
| Staple Crops | • Cereals: Millet, Sorghum, Maize, Rice, and Wheat<br>• Legumes: Cowpea (Beans) and Groundnut<br>• Sugarcane |
| Cash Crops | • Sesame<br>• Hibiscus |

| Category | Major Components |
|---|---|
| | • Cotton |
| Fruits and Tree Crops | • Mango<br>• Dates<br>• Guava<br>• Watermelon<br>• Bambara nuts |
| Vegetables & Root Vegetables | • Tomato<br>• Onion<br>• Okra<br>• Pepper<br>• Lettuce<br>• Cabbage<br>• Carrot<br>• Sweet potato<br>• Cassava |
| Livestock, Animal Products and Fisheries | • Cattle<br>• Goats<br>• camels<br>• Sheep<br>• Poultry<br>• Dairy (Milk, Cheese)<br>• Hides and Skins<br>• Fisheries (available water bodies for production) |
| Other Commodities | • Gum Arabic (from acacia trees)<br>• Spices like ginger (though less common) |

*Table 1: Categories of major commodities in Jigawa state*

Jigawa State is a leading producer of several industrial and export commodities, including sesame, hibiscus, wheat, and livestock such as cattle, sheep, and goats. The state also makes substantial contributions to Nigeria's national output of rice, millet, and cassava. This agricultural diversity positions Jigawa as a strategic destination for investment in the agricultural sector within Nigeria. According to Jigawa State Agricultural and Rural Development Authority (JARDA), the following are the major crops have potentials for industrial production in the state

1. Sesame
2. Hibiscus
3. Chili
4. Wheat

5. Millet
6. Sorghum
7. Maize
8. Rice
9. Groundnut
10. Mango
11. Tomato

However, the following agricultural commodities have been identified as priority value chains where Jigawa State has a comparative and competitive advantage in Nigeria:

1. Hibiscus
2. Sesame
3. Wheat
4. Rice
5. Livestock (Beef, dairy)
6. Millet

Leveraging these priority value chains cannot only enhance local economic development but also elevate Jigawa's status as a vital player in Nigeria's agricultural landscape. Investing in infrastructure, access to finance, and modern agricultural techniques will be essential for maximizing these opportunities and fostering sustainable growth in the State.

### 7.3.2 Food crop and livestock production trends

#### *7.3.2.1 Food Crop Production*

Jigawa State benefits from favourable weather conditions and abundant natural resources, making it well-suited for crop production. Of the 1.9 million hectares of arable land, approximately 400,000 hectares are located in the floodplain region (FADAMA), spanning areas from Zakirai in Ringim Local Government Area (LGA) through Taura, Miga, Kafin Hausa, Auyo, Hadejia, Kiri Kasama, and Guri LGAs. This FADAMA land supports year-round farming. The remaining 1.5 million hectares are primarily utilized for rainfed agriculture but also have significant underground water resources to enable year-round irrigation.

Jigawa State is particularly competitive in the production of rice, sesame, hibiscus, groundnut, wheat, soybean, sorghum, millet, maize, sugarcane, cotton, and tomatoes. Opportunities exist to further develop the agricultural sector by expanding the cultivated area, improving production efficiency, and increasing overall capacity.

| Crops | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|---|---|---|---|---|---|---|---|---|---|
| Millet | 481,195 | 505,255 | 535,505 | 546,434 | 573,756 | 655,177 | 507,163 | 510,349 | 593,440 |

| Crops | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|---|---|---|---|---|---|---|---|---|---|
| Sorghum | 686,948 | 721,295 | 900,056 | 835,103 | 876,858 | 637,469 | 404,761 | 605,150 | 418,812 |
| Rice | 65,936 | 69,233 | 127,942 | 107,530 | 112,907 | 1,014,672 | 453,350 | 453,350 | 604,818 |
| Maize | 111,002 | 114,332 | 127,360 | 127,360 | 129,907 | 42,201 | 125,516 | 125,516 | 120,869 |
| Wheat | 15,768 | 16,555 | 22,408 | 21,960 | 21,301 | 48,901 | 49,860 | 50,780 | 55,858 |
| Sesame | 59,425 | 62,396 | 61,985 | 74,382 | 81,820 | 77,382 | 85,911 | 128,527 | 138,201 |

*Table 2: Production Volume (Mt) of Priority Commodities in the State*

*Source: Jigawa State Agricultural and Rural Development Authority (JARDA), Feb 2024*

Various development initiatives, such as J-CARES, L-PRES, and CASP, have supported farmers by promoting good agronomic practices (GAP), soil fertility management, and climate-resilient approaches. These programs have positively impacted farming practices, including post-harvest management, business management skills, group formation, and market system development.

Additionally, Jigawa State offers significant potential for agro-processing due to the availability of raw materials essential for agro-allied industries. This creates opportunities for food processing companies to thrive. The state also provides an ideal environment for seed research, processing, and multiplication, meeting the growing demand for quality seeds both within Nigeria and across the West African region.

#### *7.3.2.2 Livestock Production*

Jigawa State, situated within the Sudan savannah vegetative belt, boasts extensive grazing land highly suitable for livestock production. The current livestock population is estimated at 3.06 million cattle, 5.6 million sheep, 6.6 million goats, and 15.9 million poultry. The state is also home to Maigatari, one of West Africa's largest livestock markets. Despite these impressive numbers, Nigeria, with a total livestock population of approximately 19.8 million cattle, 43.4 million sheep, 76 million goats, and 213 million poultry (InvestJigawa, 2021), still relies heavily on meat and dairy imports. In 2020, for instance, the country spent about USD 1.5 billion on milk importation, highlighting significant investment opportunities to meet local and global demand.

Livestock farming in Jigawa primarily depends on the free-range grazing system, which is often hindered by acute seasonal feed scarcity. This challenge is further compounded by environmental degradation, including deforestation due to rising demand for firewood, which leads to biodiversity loss and diminished grazing lands. Additionally, desert encroachment and resource competition between crop and livestock farmers have exacerbated the situation. The growing frequency of farmer-

herder conflicts across Nigeria prompted the Federal Government to introduce the National Livestock Transformation Plan (NLTP).

| Livestock Category | 2022 | 2023 |
|---|---|---|
| Cattle | 3,100,605 | 3,255,635 |
| Sheep | 6,046,893 | 6,228,300 |
| Goat | 7,011,869 | 7,222,225 |
| Chicken | 19,785,482 | 23,742,579 |
| Guinea Fowl | 3,792,570 | 4,551,084 |
| Duck | 1,528,206 | 1,833,847 |
| Turkey | 119,361 | 131,297 |
| Pigeon | 709,590 | 780,549 |
| Donkey | 32,944 | 34,262 |
| Camel | 16,844 | 17,518 |
| Horse | 16,874 | 17,549 |

*Table 3: Livestock population in Jigawa in 2022 and 2023*

Source: National Agricultural Extension and Research Liaison Services (NAERLS)

The NLTP aims to establish market-driven ranches to enhance livestock productivity through breed improvement, pasture development, and efficient land and water management. For Jigawa State, this presents an opportunity to significantly boost livestock production by implementing advanced breeding programs and improving feeding, healthcare, and housing standards. The state's 452 grazing reserves, spanning 220,000 hectares, provide immense potential for pasture development to benefit both sedentary and nomadic herders. In addition, 81 grazing reserves have been developed with watering facility powered by windmills and are fully functional. There are 6 major international stock routes traversing the State with the total distance of 3,185km and numerous national and intra State stock routes. They are Kanwarin-50km, Burseli-80km, Adare-560km, Guri-585km, Gwiwa to Kano-100km and Yobe to Katsina via Birniwa-420km.

These reserves offer lucrative opportunities for investors interested in establishing ranches for cattle, sheep, or goats, as well as large-scale poultry farms. With ample land for pasture cultivation, shallow groundwater resources, abundant sunshine for

solar energy, and reliable infrastructure—including all-weather roads, national power grid access, and mobile network coverage—Jigawa State provides a favourable environment for sustainable livestock development and agribusiness investments.

### 7.3.3 Value addition in agriculture products

Over the past five years, Jigawa State has prioritized value addition and agribusiness. Through the active support of InvestJigawa, the state has attracted numerous businesses that have established processing industries, transforming agricultural commodities such as rice, hibiscus, and sesame into value-added products. This has created jobs, increased farmer incomes, and positioned the state as a hub for agricultural exports. The Federal Government of Nigeria (FGN) has initiated the Special Agro-industrial Processing Zones (SAPZ) program, in collaboration with state governments, development partners, relevant federal ministries, departments, private investors, aiming to establish Agro-processing clusters in agriculturally rich regions nationwide. This initiative seeks to bolster modern Agro-processing capabilities, catering to the growing domestic market, bolstering farmer incomes, mitigating postharvest losses, and fostering import substitution while creating employment opportunities, particularly for youth and women.

Through a clustering approach, the initiative will try address investment barriers such as infrastructural deficits and feedstock inadequacies in agro-processing enclaves across Jigawa. The state government's decision to participate in the SAPZ initiative (funded by the African Development Bank), aligns with its agenda on agriculture, rural development, and poverty reduction, signalling a timely endeavour to enhance smallholder farmer productivity, facilitate rural infrastructure development, and unlock market linkages for value addition and export prospects.

Key industry players such as Majestic Dairy Products, Majestic Rice Mill, and Jigawa Rice Mill, among others, are already operational and have the capacity to form the nucleus of agro-industrial clusters in their respective locations, such as Birnin Kudu, Gumel, Hadejia, and Taura. These clusters can provide a conducive ecosystem for value addition and processing activities, particularly in sectors like food processing, agro-export, and agro-input manufacturing. The privatization and functional status of these facilities demonstrate their readiness to engage with other stakeholders and collaborate within the framework of agro-industrial clusters.

For instance, Majestic Dairy Products in Birnin Kudu and Crystal Sugar Company in Hadejia can anchor clusters focused on dairy processing and sugar production, respectively, while facilities like Three Brothers Rice Mill in Hadejia and Jigawa Rice Mill in Gujungu, Taura, can spearhead clusters dedicated to rice milling and processing. The presence of privately owned enterprises like Danmodi Food Processing Co., Kateko Poultry & Fishery Farms, and Malam Alu Farms, among others, highlights the vibrant entrepreneurial ecosystem within the state. These businesses

can contribute to the diversification and expansion of agro-industrial clusters, particularly in sectors such as cassava processing, poultry, fisheries, and tomato production. Clustering these enterprises together and providing shared infrastructure such as warehousing facilities, processing plants, cold storage units, and logistics services can create synergies that drive innovation, value addition, and market access for local agribusinesses

## 7.4 Trade and export markets

The state has about 32 markets. The state's proximity to Niger and participation in the African Continental Free Trade Area (AfCFTA) positions Jigawa to capitalize on regional trade opportunities. The development of the Export Processing Zone at Maigatari demonstrates the government's commitment to unlocking Jigawa's export potential by fostering export-oriented value chains and ensuring compliance with international quality standards. The Maigatari Export Processing Zone in Jigawa State serves as a strategic location for promoting export-oriented activities, providing easy access to neighbouring countries such as Niger. This EPZ facilitates trade and industrial activities, potentially contributing to Nigeria's export earnings and economic growth. It has 11 warehouses, banking facilities, hotel accommodation, a container terminal and security services. Presently, there are 5 companies operating on location.

### 7.4.1 Smallholders' participation in state value chains

Smallholder farmers also grapple with limited access to quality seeds, fertilizers, and modern equipment, which constrains their productivity. Post-harvest losses, particularly in fruit production, remain a persistent issue due to inadequate storage facilities, leading to reduced incomes and food insecurity. Pest and disease outbreaks further exacerbate risks to crop yields, while land tenure complexities hinder large-scale investment and mechanization, despite initiatives like the Land Acquisition and Resettlement Framework (LARF) aimed at facilitating agribusiness development.

Under the leadership the State Governor, His excellency Mallam Umar Namadi, agriculture has been strategically positioned as a cornerstone for the growth and development of Jigawa State. The administration's agricultural policy is anchored on three key pillars: food security, job creation, and attracting private sector investments. In collaboration with federal agencies, development partners, and private sector stakeholders, the state government has implemented various agricultural programs to boost productivity, enhance livelihoods, and ensure food security. These initiatives include subsidized inputs, extension services, capacity-building programs, and the establishment of Cluster Farms and processing facilities. Significant investments have also been made in irrigation infrastructure to support year-round farming activities.

### 7.4.2 Public-private partnership and the promotion of value chains

Jigawa State has gone ahead to update and gazette its public-private partnerships (PPP) policy in 2023, showing its commitment towards institutionalising such arrangements. It has significant opportunities for advancing agricultural productivity through public-private partnerships (PPPs) that promote value chain development. These partnerships enable the pooling of resources, expertise, and infrastructure to enhance agricultural operations from production to processing, marketing, and export. The state has already demonstrated the potential of PPPs in sectors like rice processing and sesame export, attracting investors to establish processing plants and create jobs. By fostering collaboration between the government, private investors, and local farmers, Jigawa can strengthen market linkages, improve access to finance and technology, and encourage value addition for crops such as rice, hibiscus, and groundnuts. Additionally, promoting value chains enables the development of export-oriented agricultural products, creating opportunities for higher income generation and positioning Jigawa as a hub for agribusiness in northern Nigeria.

### 7.4.3 Infrastructure along agricultural trade corridors

The development of infrastructure along agricultural trade corridors presents immense opportunities for transforming Jigawa's agricultural sector. The state's strategic location, bordered by the Niger Republic and close to other northern states, makes it a natural gateway for regional trade. The ongoing investment in rural access roads, storage facilities, and aggregation centres along these corridors can facilitate the seamless movement of goods, reducing transportation costs and post-harvest losses. Establishing market hubs along these corridors will further enhance access to domestic and international markets, encouraging commercial farming and agro-industrial growth. Notably, initiatives such as the development of the Maigatari Export Processing Zone highlight the state's commitment to leveraging infrastructure for trade facilitation and value addition. Expanding these efforts will boost economic activities, attract investors, and enable farmers to benefit from competitive pricing and larger markets.

## 7.5 Policy Integration

### 7.5.1 Regulatory environment for agriculture and agricultural trade

Jigawa State has embraced a comprehensive policy approach to address agricultural challenges and unlock opportunities. The state's agricultural policies align with national strategies such as the National Development Plan (NDP) and the National Strategy for Human Capital Development (NSHCD). This alignment ensures that Jigawa benefits from federal support while addressing local needs. Key interventions, such as the Cluster Farming Initiative, subsidized inputs programs, and investments in irrigation infrastructure, have already shown promising results in improving productivity and reducing poverty. Furthermore, the adoption of the Land Acquisition

and Resettlement Framework (LARF) facilitates large-scale agribusiness investments while protecting local communities.

Additionally, the state's partnership with development agencies and private sector actors strengthens the implementation of innovative projects such as renewable energy-powered processing facilities and capacity-building programs for farmers. These frameworks not only promote sustainability but also create a favourable environment for long-term agricultural transformation. By integrating these policies and interventions, Jigawa is positioned to maximize its agricultural potential and drive inclusive economic growth.

# 8 JSAIP Strategic Programme Areas

## 8.1 Overarching Goal of the JSAIP

The goal of the Jigawa State Agricultural Investment Plan (JSAIP) is to provide a comprehensive Investment Strategy that is aligned with the Jigawa State's Agricultural Policy to promote sustainable, inclusive, and market-oriented agricultural development. The Jigawa State Agricultural Investment Plan (JSAIP 2024-2030) is expected to attract investments, mobilize resources, and turn the goals of the Jigawa State Agricultural Policy (JSAP 2024-2030) into real, actionable steps. This plan's aim is to boost agricultural growth and improve food security by facilitating private sector entry into the state through investments with a specific focus on areas especially highlighted in the agricultural policy including irrigation systems, storage facilities, climate-smart production, and livestock development.

## 8.2 Alignment to Jigawa State Agricultural Policy (JSAP) and other policies

Using the objectives pursued by the Jigawa State Agricultural Investment Policy, the following strategic program areas have been developed. Each program area groups related objectives to ensure a focused, coordinated, and impactful approach to achieving the policy goals.

### 8.2.1 Alignment to Jigawa State Agricultural Policy (JSAP)

A. Climate-Resilient and Sustainable Agriculture: This program will ensure the integration of climate-smart agricultural principles and practices across value chains and food systems. The approach goes beyond on-farm activities, focusing on value addition through processing, light manufacturing, marketing, retailing, and provisioning. By embedding climate-smart principles, the program aims to enhance productivity, resilience, profitability, livelihoods, and sustainability while reducing greenhouse gas emissions. A holistic focus on food systems will ensure food supply, job creation, economic growth, and planetary health in an inclusive and equitable manner.

**JSAP Objectives Addressed:**

- Promote climate-smart agriculture principles and practices across the value chains and food systems domains.
- Promote sustainable livestock development principles and practices across the value chains and food systems domains.
- Harness land, water, and energy resources for expanded, sustainable, and integrated irrigated agriculture.
- Promote increased gender-responsiveness and mainstream youths, women, and other vulnerable groups in agriculture and livestock development across the value chains.

**Key Focus Areas:**

- Climate adaptation and mitigation strategies in farming and livestock.
- Development of sustainable irrigation systems.
- Inclusion of vulnerable groups to enhance equity and social resilience in agriculture.

B. Market-Driven Agricultural Value Chains and Trade: This program area focuses on strengthening agricultural value chains and modernizing trade systems to create a more market-driven approach to agriculture. It integrates innovative technologies and modern extension services to increase efficiency and profitability while ensuring inclusivity. Emphasis is placed on transforming agricultural markets, improving access to inputs, and enhancing trade systems, including commodity exchanges.

**JSAP Objectives Addressed:**

- Support modern value chain and market-oriented agricultural extension services and input delivery systems.
- Strengthen trade, market, and commodity exchange systems for more profitable, inclusive, and sustainable agriculture.
- Promote research and development, innovations, and technology in Jigawa State agriculture.

**Key Focus Areas:**

- Building robust agricultural value chains from production to processing and distribution.
- Modernizing extension services to align with market demands.
- Supporting the use of innovative technologies and research to enhance agricultural competitiveness.

C. Agro-Industrialization and Mechanization: This program seeks to drive agro-industrialization by fostering private-sector-led investments and expanding opportunities for mechanization. By leveraging public-private partnerships and innovative financing mechanisms, the program will enhance processing capabilities, value addition, and productivity through modern equipment and industrial-scale solutions.

**JSAP Objectives Addressed:**

- Accelerate agro-industrialization through increased government-supported private-sector-led investments and partnerships.
- Expand opportunities for mechanization in agriculture.
- Build and strengthen sustainable and comprehensive agricultural financing mechanisms.

**Key Focus Areas:**

- Supporting the development of agro-processing industries and value addition.
- Promoting mechanization to enhance productivity and efficiency.
- Establishing financing models to support industrial-scale investments.

D. Policy, Governance, and Institutional Strengthening: This program aims to build robust governance structures and foster collaboration for effective policy planning and implementation. It promotes gender mainstreaming, youth inclusion, and comprehensive financing mechanisms to ensure that agricultural policies are transformative and inclusive.

**JSAP Objectives Addressed:**

- Promote increased gender-responsiveness and mainstream youths, women, and other vulnerable groups in agriculture and livestock development across the value chains.
- Build and strengthen sustainable and comprehensive agricultural financing mechanisms.
- Ensure effective inter-governmental collaboration and coordination for transformative agricultural policy planning and implementation.

**Key Focus Areas:**

- Strengthening governance structures and inter-governmental collaboration for policy implementation.
- Gender mainstreaming and inclusive policymaking.
- Establishing frameworks for financing and sustaining agricultural programs.

## 8.3 Alignment to other key state policy development instruments

As established in section 4, the Jigawa State Agricultural Investment Plan (JSAIP) is firmly aligned with the Jigawa State Agricultural Policy (JSAP). The JSAP itself is aligned with the Comprehensive Development Framework (CDF), which serves as the cornerstone for the state's long-term development planning. The CDF, now in its third edition (CDF III), integrates with key national development instruments, including the National Development Plan (NDP) 2021–2025, the National Strategy for Human Capital Development (NSHCD), and the National SDGs Implementation Plan. This creates a multi-layered alignment that cascades from national priorities to state-specific goals and strategies.

**Key Areas of Alignment:**

1. National and State Development Priorities:

   The JSAIP, through its alignment with the JSAP and CDF, adopts the national priorities outlined in the NDP, NSHCD, and SDGs. These include:

- Poverty reduction and improved food security.
- Promoting inclusive and sustainable economic growth.
- Enhancing gender equality and women's empowerment.
- Supporting innovation and industrialization in agriculture.
- Ensuring environmental sustainability and resilience.

2. Challenges and Gaps Addressed:

The JSAIP builds on the findings from the review of the 2016 Jigawa State Agricultural Policy and the gaps highlighted in the CDF III. These include low productivity, limited mechanization, high post-harvest losses, and the fragmented land tenure system. By addressing these issues, the JSAIP contributes to transforming the agricultural sector into a vibrant, youth-friendly, and commercially viable industry.

### 8.3.1 Policy Thrust and Objectives:

The JSAIP is shaped to deliver on the overarching policy thrust of the JSAP—ensuring inclusive food security, improved nutrition, and sustainable agro-based economic growth. It incorporates the strategic priorities, objectives, and results framework of the JSAP while addressing both historical and emerging challenges in the state's agricultural sector.

### 8.3.2 Integration of Cross-Cutting Themes:

The JSAIP integrates climate-smart agriculture, youth and gender inclusion, and sustainable resource utilization to align with the CDF's goals of fostering inclusive growth and resilience at the state level.

By aligning the JSAIP with the JSAP, the CDF, and national policy instruments, Jigawa State ensures that its agricultural sector remains a driver of economic transformation while contributing to national and global development goals. This alignment also fosters collaboration between the state and federal governments, development partners, and the private sector for effective implementation.

# 9 JSAIP Strategic Programme Area Selection

## 9.1 Program area prioritisation criteria

To ensure a transparent and objective evaluation of agricultural programs and projects, a standardized ranking system was used. This framework was designed to guide decision-making by providing a uniform methodology for assessing projects based on their strategic relevance, feasibility, financial viability, and overall impact. The criteria enable stakeholders to prioritize initiatives that align with Jigawa State's agricultural goals, maximize resource allocation, and deliver measurable benefits to the economy and communities. By applying these ranking criteria consistently, the state can effectively identify high-value projects that support sustainable agricultural development and align with the objectives of the Jigawa State Agricultural Policy (JSAP).

| Category | Criteria | Sub-criteria | Description |
|---|---|---|---|
| **Attractiveness** | **Impact** | Food Security | Evaluate how much the program/project contributes to increasing food availability, accessibility, and stability. |
| | | Job Creation & Women Empowerment | Assess the program's potential to generate employment opportunities, especially for women and youth. |
| | | Local Resource Utilisation/Efficiency | Determine how effectively the program leverages local resources (e.g., land, water, labour) for maximum benefit. |
| | **Opportunity** | Security | Analyse how the program/project impacts or aligns with local security dynamics. |
| | | Market Opportunity | Consider the scale of potential markets (local, regional, international) for the program's outputs. |
| | | Active Investor Interest | Assess the level of interest already expressed by investors |

| Category | Criteria | Sub-criteria | Description |
|---|---|---|---|
| Feasibility | Capability | Natural Endowments | Evaluate the availability and suitability of natural resources for the project. |
| | | Skills/Labour | Assess the availability of skilled labour to support the program. |
| | | Access to Land/Infrastructure | Determine the ease of acquiring land and using existing infrastructure for the program. |
| | Readiness | Ease of Removing Barriers | Evaluate the program's potential to overcome policy, regulatory, or operational barriers. |
| | | Support for Sub-Sector Incentives | Assess whether the program aligns with existing government incentives for the agricultural sub-sector. |
| | | Political Will | Analyse the extent to which government and leadership support the program. |
| Viability | Economic Soundness | Profitability and ROI Potential | Assesses the expected returns from the project relative to its investment. |
| | | Cost Effectiveness | Measures the efficiency of resource utilization and cost structure of the project. |
| | | Funding Availability and Accessibility | Examines the ease of accessing finance or funding support for the project. |
| | | Financial Risk Profile | Analyses potential financial risks, including market volatility and cost overruns. |

*Table 4: Programs/project prioritisation ranking criteria*

Details of all the JSAIP investment programs prioritisation ranking is located in the annex.

## 9.2 Program areas outcomes

### 9.2.1 JSAIPA 1: Climate-Resilient and Sustainable Agriculture

#### *9.2.1.1 Outcomes and indicators for JSAIPA 1: Climate-Resilient and Sustainable Agriculture*

**A. Enhanced Value Addition of Agricultural Produce**

- Proportion of agricultural produce processed or transformed into higher value-added products.

- Increase in the value of agricultural exports of processed or value-added products compared to raw agricultural commodities originating from the state.
- Growth in the number of companies and private-sector partners committed to implementing value addition operations within the state.

**B. Improved Agricultural Productivity for Key Staples, Fruits, Vegetables, and Tree Crops**

Key Crops:

- Millet
- Sorghum
- Maize
- Rice
- Wheat
- Sesame
- Groundnut
- Cowpea
- Hibiscus
- Mango
- Tomato
- Dates

Metrics:

- Increased yield per hectare.
- Expanded acreage under cultivation.
- Growth in total volume of agricultural output.

**C. Improved Livestock Productivity for Cattle, Dairy, Goat, Poultry, and Other Livestock**

Key Livestock:

- Cattle: For beef and dairy production.
- Dairy: Specialized breeds for milk production.
- Goats: For meat, milk, and skin production.
- Poultry: Including broilers, layers, and indigenous chicken breeds.
- Fish: Including aquaculture production for catfish and tilapia.

Metrics:

- Increased Livestock Productivity
  - Growth in milk yield per cow/goat.
  - Improved average daily weight gain for beef cattle, goats, and poultry.
  - Increase in egg production per hen.
- Expanded Livestock Population and Health
  - Growth in the number of livestock under improved management systems.
  - Increased vaccination and health program coverage for livestock.
  - Reduction in disease outbreaks
- Growth in Livestock Products and Value Addition

- Increase in the production of processed livestock products (e.g., pasteurized milk, cheese, meat cuts, canned fish).
- Growth in the number of operational livestock product processing facilities.
- Proportion of livestock products exported or supplied to high-value markets.

- Adoption of Climate-Smart and Sustainable Practices
  - Percentage of farms utilizing renewable energy systems (e.g., solar, biogas) for livestock production.
  - Increase in adoption of sustainable feed systems, such as silage and hay production.
  - Percentage reduction in greenhouse gas emissions from livestock production through improved practices (e.g., rotational grazing).
- Market and Economic Metrics
  - Growth in revenue generated from livestock and livestock products.
  - Expansion in the number of formal jobs created in the livestock sector.
  - Increase in the participation of women and youth in livestock farming and value chains.

**D. Increased Adoption of Climate-Smart Agricultural Principles and Practices**

- Percentage increase in farming households participating in Cluster Farming Initiatives practicing crop diversification.
- Growth in the number of crop processing factories and facilities (large, medium, small-scale) partially or fully powered by solar or other renewable energy sources.
- Number of extension service engineering (tractor, irrigation pumps, etc) partially or fully powered by solar or other renewable energy sources.

### 9.2.2 JSAIPA 2: Market-Driven Agricultural Value Chains and Trade

#### *9.2.2.1 Outcomes and indicators for JSAIPA 2: Market-Driven Agricultural Value Chains and Trade*

**A. Strengthened Agricultural Value Chains**

- Increased number of functional value chain clusters.
- Percentage growth in the adoption of modern value chain practices.
- Enhanced connectivity between producers, processors, and marketers.

**B. Improved Market Access and Trade Systems**

- Increased participation of farmers in structured trade and commodity exchange platforms.
- Higher profitability for farmers due to improved market access and competitive pricing.
- Growth in exports of agricultural products through better market linkages.

**C. Adoption of Agricultural Innovations and Technology**

- Increase in the number of farmers using digital platforms for market access and input procurement.
- Enhanced availability of mechanized and technology-driven solutions for production and post-harvest handling.

### 9.2.3 JSAIPA 3: Agro-Industrialization and Mechanization

#### *9.2.3.1 Outcomes and indicators for JSAIPA 3: Agro-Industrialization and Mechanization*

**A. Accelerated Agro-Industrialization**

- Increase in the number of agro-processing industries established in the state.
- Growth in private-sector investment in agro-industrial projects.
- Improved contribution of agro-industrial activities to state GDP.

**B. Expanded Mechanization in Agriculture**

- Increased proportion of farms utilizing mechanized equipment for planting, harvesting, and processing.
- Higher yields and efficiency through the adoption of mechanized practices.

**C. Strengthened Agricultural Financing Mechanisms**

- Growth in the number of farmers and agro-industrialists accessing innovative financing mechanisms.
- Percentage increase in funding allocated to agricultural industrialization projects.

### 9.2.4 JSAIPA 4: Policy, Governance, and Institutional Strengthening

#### *9.2.4.1 Outcomes and Indicators for JSAIPA 4: Policy, Governance, and Institutional Strengthening*

**A. Strengthened Governance and Coordination**

- Increased collaboration among inter-governmental and institutional stakeholders.
- Establishment of frameworks for seamless policy implementation.

**B. Increased Gender and Youth Inclusion**

- Higher participation of women and youth in agricultural activities across the value chain.
- Increase in programs tailored to vulnerable groups within the agricultural sector.

**C. Comprehensive Financing Mechanisms**

- Development of innovative financing models for agriculture.

- Increased access to credit for smallholder farmers, agribusinesses, and agro-industrialists.

These outcomes have been taking into consideration for the Monitoring and Evaluation impact indicators that is in the Annex.

## 9.3 Prioritisation of JSAIP Investment Programs

The table below highlights all the investment programs and the various program areas they impact.

| | JSAIP Investment Program | JSAIPA 1 | JSAIPA 2 | JSAIPA 3 | JSAIPA 4 | PRIORITY RANKING |
|---|---|---|---|---|---|---|
| | | Climate-Resilient & Sustainable Agriculture | Market-Driven Agric. Value Chains & Trade | Agro-Industrialization and Mechanization | Policy, Gov. & Institutional Strengthening | |
| 1. | Development of a state Industrial Policy | | | ✓ | ✓ | 5 |
| 2. | Hibiscus Processing Plant | | ✓ | ✓ | | 4.563 |
| 3. | Rehabilitation and Modernization of Existing Irrigation Systems | ✓ | | | | 4.563 |
| 4. | Large-Scale Sesame Oil Extracting Plant | | ✓ | ✓ | | 4.500 |
| 5. | Development of New Irrigation Projects | ✓ | | | | 4.375 |
| 6. | Combined Wheat Milling and Processing Factory | | ✓ | ✓ | | 4.250 |
| 7. | Renewable Energy Integration for Irrigation | ✓ | | | | 4.250 |
| 8. | Development of Renewable energy powered mechanized Agricultural Equipment Processing Hub | | ✓ | ✓ | | 4.250 |
| 9. | Slaughterhouse, Meat Processing and Value-Added Plant | | ✓ | ✓ | ✓ | 4.188 |
| 10 | Biofuel Processing Plan | | ✓ | ✓ | | 4.188 |
| 11 | Market-oriented hibiscus production | ✓ | ✓ | | ✓ | 4.188 |
| 12 | Irrigation Support for Grazing Reserves | ✓ | | | | 4.188 |
| 13 | Market-oriented sesame production | ✓ | ✓ | | ✓ | 4.125 |
| 14 | Rice value chain development | ✓ | ✓ | | ✓ | 4.063 |
| 15 | Groundwater-Based Micro-Irrigation Systems | ✓ | | | | 4.000 |
| 16 | Wheat value chain development | ✓ | ✓ | | ✓ | 3.938 |
| 17 | Millet value chain development | ✓ | ✓ | | ✓ | 3.813 |
| 18 | Beef value chain development | ✓ | ✓ | | ✓ | 3.813 |

*Table 5: Investment programs impact areas and prioritisation ranking*

Refer to the annex for prioritisation ranking sheet details.

## 9.4 JSAIP Investment Budget

### 9.4.1 Estimated Costs

The Estimated budget to roll out the JSAIP is **NGN 166,328,778,222**. The budget showing the estimated annual investment for each JSAIP program and estimated ROI is presented in the table below.

| | JSAIP Programs | Yr 1 2025 | Yr 2 2026 | Yr 3 2027 | Yr 4 2028 | Yr 5 2029 | Yr 6 2030 | Total Investment | Estimated ROI |
|---|---|---|---|---|---|---|---|---|---|
| 1. | Development of a State Industrial Policy | 50,000,000 | - | - | - | - | - | 50,000,000 | N/A |
| 2. | Hibiscus Processing Plant | 2,280,000,000 | 2,220,000,000 | 1,620,000,000 | 1,080,000,000 | - | - | 7,200,000,000 | 1,346,400,000 |
| 3. | Rehabilitation and Modernization of Existing Irrigation Systems | 3,360,000,000 | 4,480,000,000 | 4,480,000,000 | 1,120,000,000 | - | - | 13,440,000,000 | 22,400,000,000 |
| 4. | Large-Scale Sesame Oil Extracting Plant | 2,350,000,000 | 1,950,000,000 | 900,000,000 | 700,000,000 | - | - | 5,900,000,000 | 885,000,000 |
| 5. | Development of New Irrigation Projects | 5,040,000,000 | 6,720,000,000 | 6,720,000,000 | 1,680,000,000 | - | - | 20,160,000,000 | 30,240,000,000 |
| 6. | Combined Wheat Milling and Processing Factory | 8,390,000,000 | 8,110,000,000 | 5,630,000,000 | 4,430,000,000 | - | - | 26,560,000,000 | 2,350,560,000 |
| 7. | Renewable Energy Integration for Irrigation | 1,680,000,000 | 2,520,000,000 | 2,520,000,000 | - | - | - | 6,720,000,000 | 11,200,000,000 |
| 8. | Development of Renewable energy powered mechanized Agricultural Equipment Processing Hub | 2,086,920,000 | 3,086,920,000 | 1,086,920,000 | - | - | - | 6,260,760,000 | 6,400,000,000 |
| 9. | Slaughterhouse, Meat Processing and Value-Added Plant | 595,000,000 | 541,000,000 | 394,000,000 | 365,000,000 | - | - | 1,895,000,000 | 318,360,000 |

| | JSAIP Programs | Yr 1 2025 | Yr 2 2026 | Yr 3 2027 | Yr 4 2028 | Yr 5 2029 | Yr 6 2030 | Total Investment | Estimated ROI |
|---|---|---|---|---|---|---|---|---|---|
| 10. | Biofuel Processing Plan | 350,000,000 | 300,000,000 | 200,000,000 | 150,000,000 | - | - | 1,000,000,000 | 150,000,000 |
| 11. | Market-oriented hibiscus production | 1,135,950,778 | 1,314,240,000 | 705,611,601 | - | - | - | 3,155,802,379 | 4,008,500,100 |
| 12. | Irrigation Support for Grazing Reserves | 2,520,000,000 | 3,360,000,000 | 3,360,000,000 | 840,000,000 | - | - | 10,080,000,000 | 16,800,000,000 |
| 13. | Market-oriented sesame production | 2,510,257,528 | 1,988,832,199 | 1,759,780,500 | - | - | - | 6,258,870,227 | 10,025,000,050 |
| 14. | Rice value chain development | 1,899,700,170 | 1,923,501,510 | 6,249,200,400 | - | - | - | 10,072,402,080 | 14,607,600,100 |
| 15. | Groundwater-Based Micro-Irrigation Systems | 2,100,000,000 | 2,520,000,000 | 2,520,000,000 | 1,260,000,000 | - | - | 8,400,000,000 | 14,100,000,000 |
| 16. | Wheat value chain development | 8,460,706,646 | 9,528,002,939 | 2,490,740,470 | - | - | - | 20,479,450,055 | 24,900,656,123 |
| 17. | Millet value chain development | 599,900,550 | 599,981,600 | 79,200,400 | - | - | - | 1,279,082,550 | 3,456,000,500 |
| 18. | Beef value chain development | 150,900,600 | 3,909,791,521 | 3,436,300,800 | 2,000,000,000 | - | - | 9,496,992,921 | 14,700,450,300 |
| | Subtotal | 45,559,336,272 | 55,072,269,769 | 44,151,754,171 | 13,625,000,000 | - | - | 158,408,360,212 | 177,888,527,173 |
| | Contingency (5%) | 2,277,966,814 | 2,753,613,488 | 2,207,587,709 | 681,250,000 | - | - | 7,920,418,011 | |
| | **Total** | **47,837,303,085** | **57,825,883,257** | **46,359,341,879** | **14,306,250,000** | **-** | **-** | **166,328,778,222** | |

*Table 6: Summary of JSAIP Budget*

## 9.5 Implementation Framework of the JSAIP

### 9.5.1 Implementation Framework

The JSAIP will be implemented through a phased approach, ensuring resource allocation aligns with priority areas:

1. Governance and Coordination:
    - **The Jigawa State Ministry of Agriculture and Natural Resources** will serve as the lead agency, responsible for policy coordination, budgeting, and stakeholder engagement.
2. Key Implementing Bodies:
    - **InvestJigawa,** as the state's investment promotion agency, will drive private-sector engagement, facilitate partnerships, and promote investment opportunities in key value chains such as rice, sesame, and hibiscus. It will also provide incentives and support for agro-industrial projects through streamlined regulatory processes.
        - Attracting private-sector investments into the agricultural sector.
        - Facilitating public-private partnerships (PPPs) for the development of agricultural value chains.
        - Promoting export-oriented agricultural initiatives and enhancing market access.
        - Supporting the establishment of agro-processing industries and export processing zones.
    - **JARDA** will oversee agricultural extension services, capacity building for farmers, and the deployment of climate-smart technologies.
    - **State Planning and Budget Commission (SPBC):** The SPBC is expected to ensure alignment of JSAIP with broader state development goals by:
        - Allocating budgetary resources for agricultural programs and projects.
        - Monitoring and evaluating the financial performance of agricultural investments.
        - Ensuring integration of JSAIP with other state development plans.
    - **Local Governments:** Local government authorities are instrumental in the grassroots implementation of JSAIP by:
        - Facilitating land access and resolving land tenure issues.
        - Supporting farmer cooperatives and associations.

  - Coordinating local-level agricultural initiatives and capacity-building programs.

- **Development Partners and Donor Agencies:** Development partners will be encouraged to provide critical technical and financial support for the implementation of JSAIP. Their role will include:
  - Funding agricultural programs and projects in line with the JSAIP framework.
  - Providing expertise and best practices in agricultural development.
  - Supporting the state government in achieving food security and climate resilience goals.
  - Support monitoring, evaluation and learning activities.
- **Private Sector Stakeholders:** The private sector is a key driver of innovation and investment in agriculture. Their responsibilities include:
  - Investing in agro-industrialization, value chain development and identified program areas of the JSAIP.
  - Facilitating market linkages and promoting export-oriented agricultural commodities.
  - Collaborating with government institutions in implementing PPP projects.
- **Civil Society Organizations (CSOs) and Non-Governmental Organizations (NGOs):** CSOs and NGOs are expected to play a supportive role in:
  - Advocating for farmer-friendly policies and practices.
  - Delivering training and awareness programs for rural farmers.
  - Promoting gender equality and youth participation in agriculture.
  - These groups encompass a wide range of entities, including civil society advocates, trade associations like the All-Farmers Association of Nigeria (AFAN), the Jigawa Chamber of Commerce, Industry, Mines, and Agriculture (JACCIMA), NEXTJigawa, the Women Farmers Association of Nigeria, and associations representing pastoralists and livestock producers.
- **Research and Academic Institutions:** Research institutions will be expected to contribute to the scientific and technical aspects by:
  - Developing climate-smart agricultural technologies and practices.
  - Conducting research on improving crop and livestock productivity.

- Providing policy recommendations to enhance agricultural development.
- Some of key institutions and agencies identified for partnership during implementation of agricultural intervention include the International Institute for Tropical Agriculture (IITA), ICRISAT, National Horticultural Research Institute, National Agricultural Extension Liaison Services (NAERLS) and Institute for Agric Research (NAERLS/IAR). Others are BUK – CDA, Forestry Research Institute of Nigeria, Agricultural and Rural Management and Training Institute (ARMTI) and the Centre for Gender studies, BUK Kano.

- **Ministry of Water Resources:** Given the critical role of irrigation in agricultural productivity, this ministry is tasked with:
  - Developing and managing irrigation infrastructure across the state.
  - Ensuring sustainable use of water resources for agricultural purposes.
  - Collaborating on projects related to climate-smart agriculture and water conservation.
- **Ministry of Environment:** The Ministry of Environment will contribute to the environmental sustainability of agricultural activities by:
  - Promoting climate-resilient farming practices and natural resource management.
  - Overseeing reforestation programs and preventing desertification.
  - Monitoring the environmental impact of agricultural projects and ensuring compliance with environmental regulations.
- **State Agricultural Development Programs (ADPs):** ADPs act as the operational arm for implementing agricultural programs and projects. Their responsibilities include:
  - Delivering extension services to farmers and supporting the adoption of modern farming technologies.
  - Coordinating farmer training programs on improved agricultural practices.
  - Facilitating the distribution of inputs such as seeds, fertilizers, and equipment.

3. Stakeholder Inclusion:

- Farmer cooperatives, youth groups, and women-led enterprises will be actively involved in project implementation and decision-making to ensure inclusivity.

4. Investment Mobilization:

   - InvestJigawa will promote Jigawa as a top investment destination, hosting annual agricultural investment forums to attract both domestic and international investors. The agency will also facilitate public-private partnerships (PPPs) to implement large-scale projects such as agro-processing plants and renewable energy systems.

5. Monitoring and Evaluation (M&E)

A results-based M&E system will be established to track progress, ensure accountability, and provide feedback for adaptive management:

1. Key Performance Indicators (KPIs):

   - The plan will use KPIs to measure progress, including increased crop yields, expanded irrigated land, reduced post-harvest losses, job creation, and private-sector investments secured.

   - Specific metrics, such as increasing tractor density to 1 per 1,000 hectares and doubling the number of agro-processing facilities by 2030, will guide evaluations.

2. M&E Framework:

   - An independent M&E unit will be established under the Ministry of Agriculture to ensure transparency. Quarterly progress reports will be submitted to the State Executive Council, highlighting successes, challenges, and resource utilization.

   - The use of digital monitoring tools will improve data collection, particularly for tracking farmer participation and project outcomes in rural areas.

3. Role of InvestJigawa in M&E:

   - InvestJigawa will play a crucial role in evaluating private-sector performance in PPPs and investment-driven projects. The agency will track investment inflows, job creation, and the operational efficiency of supported agro-industrial enterprises.

   - It will also collaborate with the M&E unit to ensure investor satisfaction and address challenges promptly.

4. Annual Reviews and Stakeholder Engagement:

- The government will convene annual stakeholder meetings to review progress and discuss adjustments to the implementation strategy. These reviews will involve public institutions, private investors, farmers' associations, and development partners to ensure accountability and inclusivity.

## 9.6 Coordination Mechanism for the JSAIP

Effective coordination is vital for the successful implementation of the JSAIP. By leveraging these mechanisms, the JSAIP will maintain alignment, foster collaboration, and ensure effective delivery of agricultural investments across Jigawa State. The following outlines the key coordination mechanisms designed to ensure seamless execution, collaboration, and accountability among the stakeholders:

i. Steering Committee: A high-level Steering Committee, chaired by the Governor or a designated representative, will oversee the implementation of the JSAIP. This committee will include representatives from key ministries such as Agriculture, Commerce, and Environment, as well as InvestJigawa, development partners, and the private sector.

   - Role: Provide strategic direction, approve major plans and budgets, resolve policy-level issues, and monitor progress.
   - Frequency: Quarterly meetings to review performance and ensure alignment with state development objectives.

ii. Technical Implementation Unit (TIU): A dedicated TIU, housed within the Ministry of Agriculture and Natural Resources, will be established to serve as the operational hub for the JSAIP.

   - Role: Coordinate daily activities, manage program/project implementation, liaise with stakeholders, and ensure timely reporting.
   - Structure: The TIU will consist of experts in project management, monitoring and evaluation (M&E), financial management, and technical areas like climate-smart agriculture, irrigation, and value chains.

iii. Sectoral Working Groups (SWGs): SWGs will be formed around key thematic areas of the JSAIP, such as climate-smart agriculture, irrigation, livestock, and agro-industrialization. These groups will include representatives from relevant ministries, private sector actors, NGOs, and farmer organizations.

   - Role: Develop sector-specific plans, coordinate interventions, and ensure synergy among stakeholders within each thematic area.
   - Frequency: Monthly meetings to discuss progress and address challenges.

iv. Stakeholder Forums: Periodic stakeholder forums will bring together all relevant parties, including farmers, agribusinesses, development partners, and community leaders.

- Role: Facilitate dialogue, share updates, and gather feedback on JSAIP implementation.
- Frequency: Semi-annual forums to maintain transparency and inclusivity.

v. Monitoring and Evaluation (M&E) Framework: A robust M&E framework will be embedded in the coordination mechanism to track progress, evaluate outcomes, and ensure accountability.

- Role: Collect and analyse data, produce performance reports, and recommend adjustments to strategies and projects.
- Structure: Led by the TIU, with inputs from SWGs, local governments, and independent evaluators.

vi. Local Government Engagement: Local governments will play a critical role in implementing JSAIP activities at the grassroots level.

- Role: Mobilize communities, facilitate access to land and resources, and support the monitoring of activities within their jurisdictions.
- Mechanism: Regular coordination meetings with the TIU and SWGs to align local-level actions with the overall JSAIP objectives.

vii. Private Sector Collaboration: The private sector will be actively involved through partnerships facilitated by InvestJigawa.

- Role: Invest in priority areas, provide technical expertise, and drive market development.
- Mechanism: Public-private dialogue platforms and joint ventures coordinated by InvestJigawa and the TIU.

viii. Development Partner Support: Development partners will provide technical and financial assistance aligned with the JSAIP framework.

- Role: Fund specific projects, share best practices, and build institutional capacity.
- Mechanism: Bilateral agreements and coordination meetings to harmonize interventions.

ix. Communication and Information Sharing: An integrated communication strategy will ensure that all stakeholders are informed of progress and key decisions.

- Role: Disseminate updates, raise awareness, and gather feedback from the public and stakeholders.
- Tools: Regular newsletters, a dedicated JSAIP website, and social media platforms.

## 9.7 Stakeholder Engagement for the JSAIP

Stakeholder engagement is a cornerstone of the JSAIP's implementation. It ensures inclusivity, fosters collaboration, and strengthens the alignment of efforts across various entities. These engagements are structured to ensure robust participation, align diverse interests, and foster a collaborative environment for implementing the JSAIP.

The following outlines key stakeholder engagements designed to support the coordination mechanism:

| Type of Engagement | Participants | Purpose | Frequency/ Mechanism |
|---|---|---|---|
| High-Level Steering Committee Meetings | State government leadership (Governor, key commissioners), development partners, and private sector representatives. | Provide strategic oversight, resolve policy issues, approve budgets, and review overall performance. | Quarterly |
| Technical Implementation Unit (TIU) Consultations | Experts within the TIU, project managers, and technical advisors from relevant ministries and agencies | Ensure seamless project execution, coordinate inter-agency efforts, and address operational challenges. | Continuous, with bi-weekly progress reviews. |
| Sectoral Working Group (SWG) Meetings | Representatives from ministries, private sector actors, NGOs, farmer organizations, and subject matter experts. | Develop sector-specific plans, address thematic challenges, and foster synergy among stakeholders in areas like irrigation, livestock, and agro-industrialization. | Monthly |
| Periodic Stakeholder Forums | Farmers, agribusinesses, development partners, NGOs, community leaders, and local government officials. | Facilitate dialogue, share updates on JSAIP progress, and gather feedback to enhance implementation. | Semi-annually |
| Local Government Engagements | Local government authorities, community representatives, and the TIU. | Mobilize resources at the grassroots level, align local actions with JSAIP goals, and address localized challenges. | Regular coordination meetings and field visits. |
| Private Sector Engagement | Investors, agribusinesses, and industry associations. | Facilitate investments in priority areas, strengthen market linkages, and promote value chain development. | Public-private dialogue platforms, joint venture meetings, and investment roadshows. |

| Type of Engagement | Participants | Purpose | Frequency/ Mechanism |
|---|---|---|---|
| Development Partner Collaboration | Donor agencies, international NGOs, and multilateral organizations. | Align funding and technical assistance with JSAIP priorities, share best practices, and monitor progress. | Bilateral meetings and coordination workshops. |
| Community-Level Consultations | Farmers, cooperatives, traditional leaders, and community groups. | Ensure local buy-in, address concerns, and incorporate indigenous knowledge into project design and execution. | Community meetings, focus group discussions, and participatory planning sessions. |
| Communication and Information Dissemination | General public, media outlets, and key stakeholders. | Enhance transparency, raise awareness, and maintain stakeholder engagement throughout the JSAIP implementation process. | Newsletters, dedicated JSAIP website, press briefings, and social media updates. |

## 9.8 Resource Mobilisation

The **Resource Mobilization Strategy for Agricultural Development in Jigawa State (2025–2030)** outlines a comprehensive six-year plan to secure resources and investments aimed at transforming the state's agricultural sector. The strategy targets priority agricultural value chains, including hibiscus, sesame, rice, wheat, and livestock, with the goal of driving productivity, infrastructure development, and export-oriented growth. It leverages domestic resources, international funding, and public-private partnerships (PPPs) to support initiatives such as irrigation expansion, agro-processing facilities, and value chain enhancement. By aligning with Jigawa's broader economic goals, the strategy seeks to mobilize ₦30 billion in investments, improve food security, create jobs, and establish the state as a competitive hub for agribusiness.

To achieve these objectives, the strategy identifies multiple funding sources and mechanisms. Domestically, it calls for an increase in agricultural budget allocations from 12% to 20% of total state expenditure, local tax revenues through incentives for agribusinesses, and private-sector investment in processing and logistics infrastructure. Internationally, partnerships with donors such as the African Development Bank (AfDB), World Bank, and USAID are prioritized for grants, loans, and technical assistance. PPPs will co-finance projects like irrigation systems and agro-industrial facilities, supported by policies that de-risk investments and offer subsidies. Innovative mechanisms, including agricultural bonds and impact investments, will further diversify funding sources while addressing social and environmental goals. These financing efforts will enable key activities such as the expansion of irrigation to

150,000 hectares, the construction of 10 new processing plants, and training programs for 25,000 farmers in climate-smart practices and value chain development.

A robust monitoring and evaluation (M&E) framework ensures transparency and accountability throughout implementation. The Resource Mobilization Task Force will coordinate quarterly progress reviews, while annual reports and independent audits will track fund utilization and project outcomes. Key performance indicators include a 40% increase in agricultural GDP contribution by 2030, ₦30 billion in secured investments by 2027, and a 25% reduction in post-harvest losses. By mitigating risks related to economic fluctuations, climate change, and political factors, this strategy establishes a clear roadmap to unlock Jigawa's agricultural potential. Through partnerships, innovation, and coordinated efforts, Jigawa State can achieve sustainable development, enhance food security, and improve livelihoods for its population.

# 10 MONITORING AND EVALUATION

## 10.1 Objectives

The aim is to build trust and inform decision making. The reporting system will clarify the obligations for each player: What kind of report? What content using what indicators? When (periodicity)? To be addressed to who? Under what approval procedures? The reporting system will be designed to put the emphasis on linking expenditure and results (not only the outputs, but also the outcomes).

The objectives of M&E System are to monitor the performance of the program and track the effectiveness and use of the policy instruments deployed in the JSAIP.

The system will be designed to enable the Ministry of Agriculture and Jigawa State Agricultural and Rural Development Authority assess the level of achievement of:

- the outputs (targets for implementation measure).
- the outcomes for each JSAIPA); and
- the final impacts of the JSAIP. In that perspective, the JSAIP M&E System will define baseline values for all indicators. The system will also track the effectiveness and use of the policy instruments deployed in the JSAIP.

## 10.2 Data Collection

- Tools and Methods
    - Mobile Data Collection: Field officers collect and upload real time data using tools
    - Geospatial Mapping: Land use changes, crop yields, and environmental impacts are tracked by satellite imagery.
    - Surveys and interviews with stakeholders.
    - Monitoring reports from ministries and private sector partners.

- Satellite data for land use and climate monitoring.
- Community Feedback Sessions: Qualitative insights into the effectiveness of intervention are provided by farmers and cooperatives.

- Data Quality Assurance
  - Ensuring accuracy and consistency of data through regular training sessions for data collectors.
  - Uniformity for standardized reporting templates across LGAs.

### Roles and Responsibilities

| M&E Stakeholder | Role | Responsibilities |
|---|---|---|
| **MEL Team** | Core monitoring and evaluation team | – Oversee data collection, quality assurance, and reporting<br>– Conduct evaluations and prepare policy briefs |
| **Field Officers** | Field-level support | – Collect data from farmers and cooperatives<br>– Verify data accuracy at the grassroots level |
| **Extension Officers** | Field-level support | – Provide technical support to farmers<br>– Promote adoption of climate-smart practices |
| **Farmers and Cooperatives** | Beneficiaries | – Provide data, participate in surveys, offer feedback |
| **Ministry of Agriculture** | Lead government agency | – Ensure alignment of MEL activities with policy goals<br>– Facilitate resource mobilization for MEL |
| **Development Partners** | Funding and technical support | – Offer technical assistance and capacity-building support<br>– Co-fund evaluation activities |
| **Independent Evaluators** | External evaluation | – Conduct mid-term and end-term evaluations |
| **Private Sector Actors** | Investor and implementer of initiatives | – Provide market data and participate in stakeholder workshops<br>– Support value chain development |
| **NGOs and Civil Society** | Community engagement and advocacy | – Support data collection, facilitate community involvement |

*Table 7- Role & Responsibilities of M&E Stakeholders*

### Periodic Reviews and Reporting

| Report Type | Content | Frequency | Audience | Responsible |
|---|---|---|---|---|
| **Monthly Field Reports** | Collect data from farmers and cooperatives | Monthly | Local partners | Extension officers |
| **Quarterly Progress Report** | Summary of progress against KPIs, key activities, and challenges (Learning workshops). | Quarterly | Project Steering Committee, State Ministry | MEL Unit |

| Report Type | Content | Frequency | Audience | Responsible |
|---|---|---|---|---|
| **Mid-term Evaluation Report** | Detailed evaluation of progress, outcomes, and recommendations | Year 3 (2027) | Donors, State Government, Project Team | Independent Evaluators |
| **Annual Report** | Comprehensive report on annual achievements, lessons, and financials | Annually | Stakeholders, Donors, Ministry | Project Management Unit |
| **End-term Evaluation Report** | Final impact assessment, sustainability evaluation, and future recommendations | Year 6 (2030) | All stakeholders, Donors | Independent Evaluators |
| **Ad-hoc Reports** | Reports on emerging issues, risks, or specific stakeholder requests | As needed | Relevant stakeholders | MEL Unit |

*Table 8- Reporting Structure and Frequency*

## Adaptive Management, Evaluation of Impact and Adjusting Strategies

Mechanisms for Evaluating Impact and Adjusting Strategies

| Mechanism | Details | Responsible | Frequency |
|---|---|---|---|
| **Baseline Assessment** | Comprehensive data sourcing/survey to establish the starting point for all KPIs | Consultants | Year 1 (2025) |
| **Mid-term Evaluation** | Assessment of progress, effectiveness, and areas for improvement | Independent Evaluators | End of Year 3 (2027) |
| **End-term Evaluation** | Final evaluation to assess overall impact and sustainability | Independent Evaluators | End of Year 6 (2030) |
| **Quarterly Monitoring Reports** | Routine tracking of outputs and outcomes, highlighting progress and challenges | Project Managers, MEL Officers | Quarterly |
| **Annual Learning Workshops** | Review sessions with stakeholders to discuss progress, lessons, and adaptive strategies | MEL Unit | Annually |
| **Feedback Mechanism** | Structured feedback collection from farmers, cooperatives, and other beneficiaries | NGOs, Extension Officers | Ongoing |

*Table 9- Mechanisms for Evaluating Impact and Adjusting Strategies*

## Adaptive Management and Policy Adjustments

| Adaptive Mechanism | Description | Responsible | Frequency |
|---|---|---|---|
| **Community Learning Sessions** | Held in farming clusters, and bring together smallholder farmers, extension officers and local leaders to review key findings and co-design solutions that are adapted to local realities. | Field Officers | Quarterly |

| Adaptive Mechanism | Description | Responsible | Frequency |
|---|---|---|---|
| **Learning Workshops** | Engage stakeholders in identifying challenges and revising strategies | MEL Unit | Annually |
| **Policy Review Sessions** | Review agricultural policies to ensure alignment with project needs | Ministry of Agriculture | Biannually |
| **Real-Time Data Dashboards** | Use of dashboards to visualize progress and enable quick adjustments | MEL Unit | Ongoing |
| **Stakeholder Consultations** | Regular discussions with farmers, cooperatives, and private sector for feedback | Project Managers | Quarterly |

*Table 10 - Mechanism for Adaptive Management and Policy Adjustments*

# 11 SUSTAINABILITY

## 11.1 Capacity Building

The sustainability of the Jigawa State Agricultural Investment Plan (JSAIP) hinges on strengthening the capacity of all stakeholders involved in its implementation. Training programs tailored to farmers, extension workers, and agribusiness operators will focus on modern agricultural practices, technology adoption, and climate-resilient farming techniques. The JSAIP adopts an instrument-based approach, where the proposed facilities and measures serve as technical and financial tools implemented over the long term by the Jigawa State Government through InvestJigawa and the Ministry of Agriculture. These tools ensure continuous improvements in agricultural production, food security, and trade competitiveness. Moreover, institutional capacity development in government agencies will enable effective policy execution, monitoring, and periodic evaluations, allowing the plan to adapt and improve over time.

## 11.2 Environmental Sustainability

Environmental sustainability is a cornerstone of the JSAIP, ensuring that agricultural activities in Jigawa State contribute to long-term ecological balance. The plan emphasizes climate-smart agriculture practices, including soil conservation, water management, and the adoption of renewable energy for farming operations. By focusing on the state's competitive advantages through a value chain approach, the JSAIP supports sustainable production, processing, and marketing of key commodities. Accountability of investors and their commitment to implementing environmentally friendly measures is a guiding principle, ensuring adherence to sustainability goals. The protection of natural ecosystems through afforestation, anti-desertification programs, and responsible land use practices is integral to safeguarding Jigawa's agricultural future.

### 11.3 Long-Term Planning

The instrument-based approach of the JSAIP extends its impact beyond the duration of individual projects, ensuring long-term agricultural sustainability. By aligning with broader state and national development goals, the plan facilitates funding from donors to implement state-driven instruments effectively. Long-term planning includes periodic evaluations to readjust operational policy measures and enhance their performance. Public-private partnerships will attract private sector investment, ensuring financial sustainability and scalability. A transparent governance framework and the active participation of stakeholders in decision-making processes will bolster trust and accountability. The focus on regional integration and improved markets for agricultural and livestock products will further enhance the economic resilience of Jigawa State, ensuring that the JSAIP delivers enduring benefits for generations to come.

## 12 Risks and Mitigation Measures

### 12.1 Identified Risks and Mitigation Strategies

The implementation of the Jigawa State Agricultural Investment Plan (JSAIP) may face various risks that could affect its objectives. By identifying these risks and implementing the proposed mitigation measures, the JSAIP can be executed effectively, ensuring sustainable agricultural development in Jigawa State.

Below is a breakdown of these risks, their levels, and mitigation measures:

| S/N | Risk Description | Risk level | Mitigation Measures |
|---|---|---|---|
| 1 | Delays in the adoption of the JSAIP | Low | 1. Quality assurance in the preparation of the JSAIP, with the technical assistance of Prompcom+<br>2. Internal consultation on the content of the JSAIP within the State between different responsible MDAs and Specialized Institutes<br>3. Consultation with MDAs and other relevant external stakeholders to ensure relevance to and support of Member States and other stakeholders<br>4. Validation by Ministry of Agriculture and key agriculture stakeholders in the state |
| 2 | Limited budgetary allocation, delayed disbursements, or insufficient funding from donors could hinder program execution. | High | 1. Diversify funding sources through public-private partnerships (PPPs), donor engagement, and innovative financing mechanisms like green bonds.<br>2. Establish a contingency fund for critical projects.<br>3. Implement phased project execution to align |

| S/N | Risk Description | Risk level | Mitigation Measures |
|---|---|---|---|
| | | | with available resources.<br>4. Provision of adequate funding by Jigawa State Government and Donor organisations for MEL operations. |
| 3 | Inadequate resourcing of the JSAIP and its facilities and/or delays in mobilizing financial resources for the JSAIP | Medium to high | 1. Ensure high visibility of the JSAIP and advocate for its importance<br>2. Consultation with Jigawa State Government and the Ministry of Agriculture on financing the JSAIP elements that are public service/infrastructure requirements<br>3. Consultation with development partners on financing the JSAIP in areas that require technical capacity absent within the state.<br>4. Consultation with private sector on financing the JSAIP investment interventions areas<br>5. Technical support from InvestJigawa and Propcom+ for the preparation of funding requests and/or a resource mobilisation schemes |
| 4 | Limited capacity of implementing agencies and lack of technical expertise could delay project execution. | Medium | 1. Conduct targeted capacity-building programs for government officials and stakeholders.<br>2. Establish a Technical Implementation Unit (TIU) with skilled personnel to oversee JSAIP execution.<br>3. Partner with international development organizations for technical support.<br>4. Adequate capacity building for MEL team on data collection, monitoring tools and procedures. |
| 5 | Poor coordination among stakeholders could result in overlapping roles and resource wastage. | Medium | 1. Develop a clear coordination framework, with defined roles and responsibilities.<br>2. Regularly convene stakeholder meetings for alignment and progress updates.<br>3. Use technology-driven platforms for real-time communication and monitoring. |
| | Failure to identify and/or engage appropriate partners for implementation of the JSAIP and its constituent Programs | Low to Medium | 1. Analysis and stakeholder mapping of all JSAIP intervention areas<br>2. Consultation with external stakeholders |
| 6 | Inadequate data for planning and monitoring could hinder decision-making. | Medium to High | 1. Strengthen data collection systems and ensure regular updates.<br>2. Use Geographic Information Systems (GIS) for agricultural mapping and analysis.<br>3. Partner with research institutions to address |

| S/N | Risk Description | Risk level | Mitigation Measures |
|---|---|---|---|
| | | | knowledge gaps. |
| 7 | Resistance to adopting modern farming technologies and practices may slow productivity improvements. | Medium | 1. Conduct awareness campaigns to educate farmers on the benefits of modern techniques.<br>2. Provide financial incentives, such as subsidies for adopting new technologies.<br>3. Establish demonstration farms to showcase best practices. |
| 8 | Poor infrastructure and limited linkages to domestic and international markets could reduce profitability. | High | 1. Develop and maintain rural roads and market infrastructure along trade corridors.<br>2. Strengthen cooperatives and farmer groups to enhance collective bargaining.<br>3. Promote export-oriented value chains with quality certifications. |
| 9 | Frequent changes in government policies or slow administrative processes may affect program continuity. | Medium | 1. Institutionalize JSAIP within the state agricultural policy framework to ensure policy continuity.<br>2. Simplify bureaucratic procedures and improve coordination among agencies.<br>3. Establish a high-level steering committee to address policy and administrative bottlenecks. |
| 10 | Erratic weather patterns, flooding, and desertification could disrupt agricultural activities. | High | 1. Strengthen infrastructure for flood control and irrigation.<br>2. Invest in early warning systems and disaster response mechanisms.<br>3. Promote climate-smart agricultural practices, such as drought-resistant crops and water conservation techniques. |
| 11 | Unsustainable farming practices and deforestation could lead to soil erosion and loss of biodiversity. | Medium | 1. Enforce regulations on land use and environmental conservation.<br>2. Promote agroforestry and sustainable land management practices.<br>3. Partner with environmental NGOs for ecosystem restoration projects. |
| 12 | Insecurity, such as communal conflicts or theft, could disrupt agricultural activities and investments. | Low to Medium | 1. Strengthen community-based conflict resolution mechanisms.<br>2. Enhance security measures in farming and market areas.<br>3. Collaborate with local leaders to promote peaceful coexistence. |

*Table 11 - JSAIP implementation risks and mitigation measures*

# 13 ANNEXES

## 13.1 Program Implementation Matrix

| | Interventions/ Projects | Current Status/Baseline | Specific Outcomes | Objectively Verifiable Indicators | Means of Verification | Implementing Agency/Party | Budget (NGN) | | | | Total Budget (NGN) | Estimated Returns (NGN) | Funding Model |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Year 1 - 2025 | Year 2 - 2026 | Year 3 - 2027 | Year 4 - 2028 | | | |
| 1 | Development of a state industrial policy | No industrial policy in existence | Industrial policy highlighting cross cutting elements across various sectors | Government approved | Government approved | Jigawa State Ministry of Commerce and Industry | 50,000,000 | - | - | - | 50,000,000 | - | State government funding and donor support. |
| 2 | Hibiscus Processing Plant | Plant capacity utilization Product quality and safety Production costs and efficiency Market share and sales revenue Customer satisfaction and feedback | Increased revenue, job creation, improved livelihood, Community empowerment, Improved health and nutrition, Reduce waste through efficient processing and packaging, High quality products meeting international standards, develop strong brand identity | Baseline -Current production capacity, target 20% increase in first year Baseline-current employment level, target create min 50 jobs within 1st year Baseline - Current revenue, target, achieve revenue growth of rate of 15% / annum | Documents and records, On-site inspections, Third-Part Audits, Stakeholder Engagement | Jigawa Agriculture and Rural Development Authority. | 2,280,000,000 | 2,220,000,000 | 1,620,000,000 | 1,080,000,000 | 7,200,000,000 | 1,346,400,000 | PPP with clearly defined State government contributions & possibilities of international grants/investments. |
| 3 | Rehabilitation and Modernization of Existing Irrigation Systems | HVIP: 15,000 hectares currently irrigated; Warwade Dam: 1,000 hectares; Kafin Hausa Dam: 1,200 hectares. | Expanded irrigated areas to 35,000 hectares (HVIP), 3,000 hectares (Warwade), and 2,500 hectares (Kafin Hausa); Reduced water wastage by 40%. | Number of hectares rehabilitated; Percentage reduction in water wastage. | Project progress reports; Satellite and GIS monitoring. | Jigawa State Ministry of Agriculture and JARDA. | 3,360,000,000 | 4,480,000,000 | 4,480,000,000 | 1,120,000,000 | 13,440,000,000 | 22,400,000,000 | Public-Private Partnerships (PPPs) and state government contributions. |

| | Interventions/ Projects | Current Status/Baseline | Specific Outcomes | Objectively Verifiable Indicators | Means of Verification | Implementing Agency/Party | Budget (NGN) | | | | Total Budget (NGN) | Estimated Returns (NGN) | Funding Model |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Year 1 - 2025 | Year 2 - 2026 | Year 3 - 2027 | Year 4 - 2028 | | | |
| 4 | Large-Scale Sesame Oil Extracting Plant | Production Capacity baseline depends on scale of operation, Oil Extraction Efficiency is between 40 -50% Baseline quality is determined by fatty acid composition | Increased revenue, job creation for approximately 600 personnel and contribution to Nigeria's GDP | Production-total volume of oil produced/time, quality of oil produced including parameters like acidity, peroxide value and colour, Efficiency-water usage, energy consumption | Qualitative & Quantitative Data, Progress Reports, Performance Metrics and Independent Audits | Jigawa State Ministry of Commerce. | 2,350,000,000 | 1,950,000,000 | 900,000,000 | 700,000,000 | 5,900,000,000 | 885,000,000 | Public-Private Partnerships (PPPs) with defined state government contributions. |
| 5 | Development of New Irrigation Projects | Untapped water sources and underutilized lands in areas like Gumel and Babura. | Development of modern irrigation systems across 15,000 hectares; Adoption of advanced technologies like drip irrigation. | Number of hectares developed; Increase in crop yields (percentage). | Project evaluation reports; Crop yield assessments. | Jigawa State Ministry of Agriculture. | 5,040,000,000 | 6,720,000,000 | 6,720,000,000 | 1,680,000,000 | 20,160,000,000 | 30,240,000,000 | State government contributions and international grants. |
| 6 | Combined Wheat Milling and Processing Factory | Production capacity-Large-Scale Plant capacity 200 -500 TPD Major wheat producing area hence ideal location-Implement measures to minimize waste, reduce energy consumption | Increased income, job creation, foreign exchange savings, generate revenue for government, better nutrition, women empowerment, improved food security, increased efficiency and improved product quality | Baseline -Current wheat production level, target 20% increase in 2yrs Baseline-current employment level, target create min 50 jobs within 1st year Baseline -Current revenue from wheat sales, target to generate N 500 million in revenue within first year Baseline - Current revenue, target, achieve revenue growth of rate of 15% / annum | Review of company financial records, Analysis of tax records from FIRS, Review of agricultural Ministry records, Surveys of wheat farmers, Analysis of wheat production data from NBS | Jigawa State Ministry of Agriculture and Natural Resources. | 8,390,000,000 | 8,110,000,000 | 5,630,000,000 | 4,430,000,000 | 26,560,000,000 | 2,350,560,000 | International donor support and private investments. |

| | Interventions/ Projects | Current Status/Baseline | Specific Outcomes | Objectively Verifiable Indicators | Means of Verification | Implementing Agency/Party | Budget (NGN) | | | | Total Budget (NGN) | Estimated Returns (NGN) | Funding Model |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Year 1 - 2025 | Year 2 - 2026 | Year 3 - 2027 | Year 4 - 2028 | | | |
| 7 | Renewable Energy Integration for Irrigation | Predominantly diesel-powered irrigation systems with limited solar adoption. | Deployment of solar-powered systems across 10,000 hectares; Reduction in irrigation costs by 50%. | Percentage reduction in energy costs; Number of solar systems deployed. | Energy consumption audits; Installation records. | Jigawa State Ministry of Environment and Energy. | 1,680,000,000 | 2,520,000,000 | 2,520,000,000 | - | 6,720,000,000 | 11,200,000,000 | Private sector partnerships and international donor funding. |
| 8 | Development of Renewable energy powered mechanized Agricultural Equipment Processing Hub | No specific statistics on ground for production or processing companies. However advisory and technical services can be conducted by the JSIPA in collaboration with Renewable energy Developers | Expanded capacity for crop processing of up 100% increase with efficient production output. No specific production level is available for now. | Number of hectares increase in crop cultivation and processing capacity | Project progress reports; Satellite and GIS monitoring. | Jigawa State Ministry of Agriculture and JARDA. | 2,086,920,000 | 3,086,920,000 | 1,086,920,000 | - | 6,260,760,000 | 6,400,000,000 | Public-Private Partnerships (PPPs) and state government contributions. |
| 9 | Slaughterhouse, Meat Processing and Value-Added Plant | Improved waste management, increased utilization of by-products, Establishing standardized protocols and regulations to ensure safe and efficient handling of by-products. | Increased revenue, job creation, improved livelihood, Community empowerment, Improved health and nutrition, Reduce waste through efficient processing and packaging, High quality products meeting international standards, develop strong brand identity | Increase meat production capacity by 20% first year, Achieve 15% increase in revenue through value-added product sales within first 2 years, reduce waste generation by 30%, improve food safety standards by achieving 95% compliance rate, create 50 new jobs within a year. | Documents and records, On-site inspections, Third-Part Audits, Stakeholder Engagement | Jigawa State Ministry of Livestock and Fisheries. | 595,000,000 | 541,000,000 | 394,000,000 | 365,000,000 | 1,895,000,000 | 318,360,000 | Private sector partnerships with defined state govt-based regulatory involvement and international donor funding/ Equity-based funding. |
| 10 | Biofuel Processing Industry | Capacity of 10 -50 million litres/annum, feedstock, Energy Efficiency of 70-90% conversion, 50-90% | 0.5 -1.5% increase in national GDP, N5 - 10 billion annual revenue from | Technical- Biofuel yield, Energy Efficiency, Biofuel quality. Social- | Documentation Review, On-site inspections, Performance | Federal Ministry of Environment | 350,000,000 | 300,000,000 | 200,000,000 | 150,000,000 | 1,000,000,000 | 150,000,000 | Public-Private Partnerships (PPPs) with defined state |

| | Interventions/ Projects | Current Status/Baseline | Specific Outcomes | Objectively Verifiable Indicators | Means of Verification | Implementing Agency/Party | Budget (NGN) | | | | Total Budget (NGN) | Estimated Returns (NGN) | Funding Model |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Year 1 - 2025 | Year 2 - 2026 | Year 3 - 2027 | Year 4 - 2028 | | | |
| | | reduction in greenhouse gas emission | biofuel sales, 50 - 90% reduction in greenhouse gas emission compared to fossil fuels. 80 - 100% reduction in organic waste sent to landfills | Number of rural communities benefited, Improved public health, Energy Security. Environmental-Air pollution reduction, waste reduction, greenhouse gas emissions reduction, waste usage efficiency. Economic-Revenue generated from biofuel sales, number of jobs created, Annual production volume, GDP contribution | Data Analysis, Interviews and Surveys | | | | | | | | government contributions. |
| 11 | Market-oriented hibiscus production project | Average yield 1.0-ton, total output 12,423Mt, total land area 250,526ha, | Enhanced hibiscus yield per unit area; achieved market-oriented sesame production; improved farmers livelihood, commercial sesame production practiced in the state | Size of farmland clustered, output per unit area, Number of hectares devoted to hibiscus production, number of farmers accessing quality input and farm operation services. | M & Reports, farmers adoption rates, crop yield, farm size per hectare | MANR, JASCO, JARDA. | 1,135,950,778 | 1,314,240,000 | 705,611,601 | - | 3,155,802,379 | 4,008,500,100 | Public-Private Partnerships (PPPs) and state government contributions. |
| 12 | Irrigation Support for Grazing Reserves | Grazing reserves rely on seasonal grass availability; Minimal use of irrigation in grazing areas. | Deployment of solar-powered sprinkler systems to irrigate 5,000 hectares; Year-round availability of fresh grass for livestock; Reduced | Number of hectares equipped with sprinkler systems; Increase in livestock productivity and health metrics. | Livestock production data; Monitoring of irrigation system functionality. | Jigawa State Ministry of Livestock and Fisheries. | 2,520,000,000 | 3,360,000,000 | 3,360,000,000 | 840,000,000 | 10,080,000,000 | 16,800,000,000 | State government funding, private investments, and donor support. |

| | Interventions/ Projects | Current Status/Baseline | Specific Outcomes | Objectively Verifiable Indicators | Means of Verification | Implementing Agency/Party | Budget (NGN) | | | | Total Budget (NGN) | Estimated Returns (NGN) | Funding Model |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Year 1 - 2025 | Year 2 - 2026 | Year 3 - 2027 | Year 4 - 2028 | | | |
| | | | conflict over resources. | | | | | | | | | | |
| 13 | Market-oriented sesame production project | Average yield 1.22-ton, total output 157,993Mt, total land area 351,502ha, | Enhanced sesame yield per unit area; achieved market-oriented sesame production; improved farmers livelihood, commercial sesame production practiced in the state | Size of farmland clustered, output per unit area, Number of hectares devoted to sesame production, number of farmers accessing quality input and farm operation services. | M & Reports, farmers adoption rates, crop yield, farm size per hectare | MANR, JASCO, JARDA. | 2,510,257,528 | 1,988,832,199 | 1,759,780,500 | - | 6,258,870,227 | 10,025,000,050 | Public-Private Partnerships (PPPs) and state government contributions. |
| 14 | Rice value chain development project | Average yield 2.5 tons, total output 665,300Mt, total land area 249,371ha | Enhanced rice yield per unit area; achieved market-oriented sesame production; improved farmers livelihood, commercial sesame production practiced in the state | Size of farmland clustered, output per unit area, Number of hectares devoted to rice production, number of farmers accessing quality input and farm operation services. | M & Reports, farmers adoption rates, crop yield, farm size per hectare | MANR, JASCO, JARDA. | 1,899,700,170 | 1,923,501,510 | 6,249,200,400 | - | 10,072,402,080 | 14,607,600,100 | Private sector partnerships and international donor funding. |
| 15 | Groundwater-Based Micro-Irrigation Systems | Diesel-powered boreholes serve 2,000 hectares; Solar-powered boreholes operational in limited areas. | Increased irrigated land by 10,000 hectares; Transition to solar-powered systems, reducing operational costs by 50%. | Number of boreholes installed; Reduction in diesel usage. | Field surveys; Farmer adoption rates. | Jigawa Agricultural and Rural Development Authority (JARDA). | 2,100,000,000 | 2,520,000,000 | 2,520,000,000 | 1,260,000,000 | 8,400,000,000 | 14,100,000,000 | International donor support and private investments. |

| | Interventions/ Projects | Current Status/Baseline | Specific Outcomes | Objectively Verifiable Indicators | Means of Verification | Implementing Agency/Party | Budget (NGN) | | | | Total Budget (NGN) | Estimated Returns (NGN) | Funding Model |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Year 1 - 2025 | Year 2 - 2026 | Year 3 - 2027 | Year 4 - 2028 | | | |
| 16 | Wheat value chain development project | Average yield 1.1-ton total output 60,327Mt, total land area 45,000ha | Enhanced wheat yield per unit area; achieved market-oriented sesame production; improved farmers livelihood, commercial sesame production practiced in the state | Size of farmland clustered, output per unit area, Number of hectares devoted to wheat production, number of farmers accessing quality input and farm operation services. | M & Reports, farmers adoption rates, crop yield, farm size per hectare | MANR, JASCO, JARDA. | 8,460,706,646 | 9,528,002,939 | 2,490,740,470 | - | 20,479,450,055 | 24,900,656,123 | Public-Private Partnerships (PPPs) and state government contributions. |
| 17 | Millet value chain development | Average yield 1.02, total output 629,046Mt, total land area 487,984ha | Enhanced millet yield per unit area; achieved market-oriented sesame production; improved farmers livelihood, commercial sesame production practiced in the state | Size of farmland clustered, output per unit area, Number of hectares devoted to millet production, number of farmers accessing quality input and farm operation services. | M & Reports, farmers adoption rates, crop yield, farm size per hectare | MANR, JASCO, JARDA. | 599,900,550 | 599,981,600 | 79,200,400 | - | 1,279,082,550 | 3,456,000,500 | State government funding, private investments, and donor support. |
| 18 | Beef value chain development project | Average live weight of cattle 120KG, cattle population 3 million, poor grazing reserve development | Increased livestock productivity, large-scale commercial livestock production practiced in the state | Commercial livestock production practiced in the state, ranches established, industrial meat processing, improve livelihoods of the value chain actors | Livestock population, number of pastoralists accessing ranches, quantity of meat processed and traded. | MANR, JASCO, JARDA. | 150,900,600 | 3,909,791,521 | 3,436,300,800 | 2,000,000,000 | 9,496,992,921 | 14,700,450,300 | State government contributions and development partners. |

## 13.2 Impact Indicators

### 13.2.1 JSAIPA 1: Climate-Resilient and Sustainable Agriculture

| Outcome 1.1: Enhanced Value Addition of Agricultural Produce | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Outcome Indicators** | **Unit of Measure** | **Baseline** | **Cumulative Target Value** | | | | | | **Frequency** | **Data Source/ Methodology** | **Responsibility for data collection** | **Description of Indicator** |
| | | | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | | | | |
| OI.1.1.1: Proportion of agricultural produce processed or transformed into higher value-added products. | % of total produce processed | 20% | 23% | 26% | 30% | 35% | 44% | 50% | Annual | - Agricultural value chain assessments<br>- Surveys from agricultural extension services<br>- Agro-processing facility reports | Jigawa State Bureau of Statistics<br><br>M&E Unit (Min. Of Agric) | Tracks the proportion of agricultural produce processed into products like milled rice, tomato paste, or meat cuts, etc. |
| OI.1.1.2: Increase in the value of agricultural exports of processed or value-added products compared to raw agricultural commodities originating from the state. | % increase in export value (USD) | $20 million | $36 million | $50 million | $64 million | $92 million | $100 million | $20 million | Bi-annual | - Export records from commodity marketing boards<br>- Export trade statistics from Customs and Trade Ministries<br>- Agricultural export promotion agency reports<br>- | - Customs Service<br>- Export Promotion Council,<br>- Ministry of Agriculture, -<br>- Ministry of Commerce, JARDA | This indicator tracks the growth in export value of processed agricultural products versus raw commodities, measuring the annual growth in revenue from the export of processed, rather than unprocessed agricultural goods (e.g. wheat flour, rice flour) |
| OI.1.1.3: Growth in the number of companies and private-sector partners committed to | # Number of companies experiencin | 0 | 0 | 5 | 10 | 15 | 20 | 25 | Quarterly | - Reports from business associations (e.g., | Min. Of Commerce and Industry | This indicator shows the total count of companies engaged in adding value to food – |

| Outcome 1.1: Enhanced Value Addition of Agricultural Produce | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Outcome Indicators** | **Unit of Measure** | **Baseline** | **Cumulative Target Value** | | | | | | **Frequency** | **Data Source/ Methodology** | **Responsibility for data collection** | **Description of Indicator** |
| | | | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | | | | |
| implementing value addition operations within the state. | g value-added growth | | | | | | | | | Chambers of Commerce)<br>- Company registration records with the Ministry of Commerce and Industry | | either by food processing or agricultural packaging and related manufacturing work in the state |

| Outcome 1.2: Improved Agricultural Productivity for Key Staples, Fruits, Vegetables, and Tree Crops | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Outcome Indicators** | **Unit of Measure** | **Baseline** | **Cumulative Target Value** | | | | | | **Frequency** | **Data Source/ Methodology** | **Responsibility for data collection** | **Description of Indicator** |
| | | | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | | | | |
| OI.1.2.1: Increased Livestock Productivity | Average Kilogram per livestock | 50 kg | 56 kg | 59 kg | 62 kg | 69 kg | 75 kg | 50 kg | Biannually | - Livestock weight data from abattoirs/ livestock markets<br>- Livestock production surveys by agricultural extension services<br>- Monitoring reports from vet. services | Agricultural Extension Officers<br><br>FAO- (*Food & Agricultural Organisation of the UN*) supported programs on livestock development | This indicator is a measure of the average weight at market readiness or slaughter of livestock (cattle, goats) as a measure of improvements in feeding, husbandry and overall health of livestock |
| OI.1.2.2: Expanded Livestock Population and Health | # Number of livestock | 1,000,000 | 1,000,000 | 1,100,000 | 1,200,000 | 1,300,000 | 1,400,000 | 1,500,000 | Annual | - Reports from veterinary clinics and | Veterinary associations and livestock | This indicator examines the rate of growth in the livestock population and tracks the overall health |

| Outcome 1.2: Improved Agricultural Productivity for Key Staples, Fruits, Vegetables, and Tree Crops | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Outcome Indicators** | **Unit of Measure** | **Baseline** | **Cumulative Target Value** | | | | | | **Frequency** | **Data Source/ Methodology** | **Responsibility for data collection** | **Description of Indicator** |
| | | | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | | | | |
| | | | | | | | | | | immunization programs<br>- Agricultural household surveys | extension workers | of livestock by vaccination records, disease outbreak reports and mortality rates |
| OI.1.2.3: Growth in total volume of agricultural output. | Total output (Metric Ton per Year) Million | 1,525,089 MT | 1,583,332 MT | 1,649,207 MT | 1,717,662 MT | 1,788,809 MT | 1,862,751 MT | 1,939,605 MT | Annually | - Agricultural Production Surveys<br>- Farm household surveys, Stakeholder input | - Ministry of Agriculture (Agricultural Production Statistics Unit)<br>- FAO and IFAD agricultural productivity initiatives, NBS | This measure increases in total production of crops (Rice, Hibiscus, Wheat, Sesame, Millet) in Jigawa to assess agricultural progress. |
| | Millet output per year/Ha | 629,046 MT | 658,164 MT | 678,591 MT | 699,543 MT | 721,029 MT | 743,060 MT | 765,652 MT | | | | |
| | | 487,984 ha | 497,944 Ha | 502,923 Ha | 507,952 Ha | 513,031 Ha | 518,161 Ha | 523,342 Ha | | | | |
| | Sesame output per year/Ha | 157,993 MT | 163,338 MT | 169,786 MT | 176,386 MT | 183,142 MT | 190,060 MT | 197,145 MT | | | | |
| | | 351,502 ha | 362,044 Ha | 367,475 Ha | 372,987 Ha | 378,582 Ha | 384,261 Ha | 390,026 Ha | | | | |
| | Rice output per year/Ha | 665,300 MT | 686,286 MT | 722,175 MT | 759,783 MT | 799,192 MT | 840,486 MT | 883,753 MT | | | | The projections for each crop aim to reflect growth (or mitigate declines) based on observed trends, aligning with this outcome indicator |
| | | 249,371 ha | 259,346 Ha | 264,533 Ha | 269,823 Ha | 275,220 Ha | 280,724 Ha | 286,338 Ha | | | | |
| | Hibiscus output per year/Ha | 12,423 MT | 13,222 MT | 13,585 MT | 13,950 MT | 14,328 MT | 14,717 MT | 15,119 MT | | | | |
| | | 250,526 ha | 255,536 Ha | 258,091 Ha | 260,672 Ha | 263,278 Ha | 265,911 Ha | 268,570 Ha | | | | |
| | Wheat Output per year/Ha | 60,327 MT | 62,322 MT | 65,070 MT | 68,000 MT | 71,118 MT | 74,428 MT | 77,936 MT | | | | |
| | | 45,000 ha | 46,367 Ha | 47,062 Ha | 47,768 Ha | 48,485 Ha | 49,212 Ha | 49,951 Ha | | | | |

| Outcome 1.3: Improved Livestock Productivity for Cattle, Dairy, Goat, Poultry, and Other Livestock | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Outcome Indicators** | **Unit of Measure** | **Baseline** | **Cumulative Target Value** | | | | | | **Frequency** | **Data Source/ Methodology** | **Responsibility for data collection** | **Description of Indicator** |
| | | | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | | | | |
| OI.1.3.1: Increased Livestock Productivity | % increase in livestock productivity per animal unit | 50% | 50% | 55% | 60% | 65% | 70% | 75% | Annual | - Monitoring from livestock extension services<br>- On-farm production records | Agricultural Development Programs (ADPs) | This measures the productivity of livestock, particularly dairy animals, and indicates improved feeding, genetics, and husbandry practices. |
| OI.1.3.2: Expanded Livestock Population and Health | % increase in population and health coverage | 3.6 million (Cattle), | 3.69 | 3.78 | 3.87 | 3.96 | 4.06 | 4.16 | Annual | - Livestock surveys<br>- Veterinary services reports | - Ministry of Agriculture and Livestock Development<br>- Veterinary Services Department | This indicator racks growth in livestock population and improvement in health, using metrics such as vaccination rates, mortality rates, and disease prevalence |
| | | 5.6 million (Sheep), | 5.79 | 5.99 | 6.20 | 6.42 | 6.64 | 6.87 | | | | |
| | | 6.6 million (Goats) | 6.86 | 7.14 | 7.42 | 7.71 | 8.00 | 8.30 | | | | |
| OI.1.3.3: Growth in Livestock Products and Value Addition | % increase in the value of livestock products | NIL | 5% | 10% | 15% | 20% | 25% | 30% | Biannual | - Market surveys for livestock product demand<br>- Export data for processed livestock products<br>- Processing plant production records | - Livestock Marketing Boards<br>- Agro-Processing Development Agencies<br>- Ministry of Trade and Commerce | Tracks improved productivity per animal unit through better management practices. |
| OI.1.3.4: Adoption of Climate-Smart and Sustainable Practices | % of farmers adopting climate- | TBD | TBD | TBD | TBD | TBD | TBD | TBD | Annual | - Extension Service Officer<br>- Farm surveys on climate-smart practices | - Agricultural Extension Services | Tracks the percentage of livestock farmers adopting climate-smart and sustainable practices to enhance |

| Outcome 1.3: Improved Livestock Productivity for Cattle, Dairy, Goat, Poultry, and Other Livestock | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Outcome Indicators** | **Unit of Measure** | **Baseline** | **Cumulative Target Value** | | | | | | **Frequency** | **Data Source/ Methodology** | **Responsibility for data collection** | **Description of Indicator** |
| | | | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | | | | |
| | smart practices | | | | | | | | | | | resilience to climate change while improving productivity. |
| OI.1.3.5: Market and Economic Metrics | Revenue generated from livestock products (NGN/USD) | 20 million NGN | 20 million NGN | 25 million NGN | 30 million NGN | 35 million NGN | 40 million NGN | 45 million NGN | Quarterly | - Livestock product market price data<br>- Export records of livestock products<br>- Reports from livestock cooperatives and markets | - Livestock Market Regulatory Authorities<br>- Private Sector Livestock Market Associations<br>- Ministry of Livestock and Trade | This indicator measures the economic performance of the livestock sector by tracking revenue from livestock products sold in local and export markets |

| Outcome 1.4: Increased Adoption of Climate-Smart Agricultural Principles and Practices | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Outcome Indicators** | **Unit of Measure** | **Baseline** | **Cumulative Target Value** | | | | | | **Frequency** | **Data Source/ Methodology** | **Responsibility for data collection** | **Description of Indicator** |
| | | | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | | | | |
| OI.1.4.1: Percentage increase in farming households participating in Cluster Farming Initiatives practicing crop diversification. | % increase of farming households | 20% | 20% | 25% | 30% | 35% | 40% | 45% | Annual | - Jigawa State Ministry of Agriculture.<br>- Agricultural Extension Service Providers (under state ADPs).<br>- Farmer-based organizations (FBOs) and cooperatives. | - Jigawa Agricultural and Rural Development Authority (JARDA).<br>- State-level FADAMA III Coordination Office.<br>- International Development | This indicator measures the percentage increase of farming households adopting crop diversification (e.g., planting legumes, cereals, vegetables) under cluster farming initiatives based on the objectives of increasing household food security and income resilience |

| Outcome 1.4: Increased Adoption of Climate-Smart Agricultural Principles and Practices | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Outcome Indicators** | **Unit of Measure** | **Baseline** | **Cumulative Target Value** | | | | | | **Frequency** | **Data Source/ Methodology** | **Responsibility for data collection** | **Description of Indicator** |
| | | | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | | | | |
| | | | | | | | | | | - World Bank-FADAMA project reports. | Partners (FAO, IFAD, USAID). | and improving soil fertility. |
| OI.1.4.2: Growth in the number of crop processing factories and facilities (large, medium, small-scale) partially or fully powered by solar or other renewable energy sources. | # of crop processing factories and facilities | 10 units | 10 | 12 | 14 | 16 | 18 | 20 | Biannual | - Jigawa State Ministry of Industry and Commerce.<br>- Reports from the Rural Electrification Agency (REA).<br>- Data from private sector actors (solar energy companies).<br>- Records from cooperative-run processing facilities. | - Jigawa Ministry of Commerce and Industry.<br>- Rural Electrification Agency (REA).<br>- Nigeria Incentive-Based Risk Sharing System for Agricultural Lending (NIRSAL).<br>- Agricultural Development Agencies (ADPs) | Tracks (in number) the increase in crop processing facilities—across large, medium, and small scales—that use renewable energy systems (e.g. solar, biogas, CNG and wind power) |
| OI.1.4.3: Number of extension service engineering (tractor, irrigation pumps, etc) partially or fully powered by solar or other renewable energy sources. | # of units of extension service equipment per aggregation | 5 | 5 | 7 | 9 | 11 | 13 | 15 | Annual | - Inventory reports from Agricultural Mechanization Departments.<br>- Field inspections conducted by Extension Service Providers. | - Ministry of Agriculture Mechanization Units.<br>- Rural Renewable Energy Agencies (e.g., UNDP GEF Solar for Agriculture Projects). | This indicator measures number of extension service equipment e.g. tractors, irrigation systems, and other machinery that are fully or partially powered by renewable energy sources. |

| Outcome 1.4: Increased Adoption of Climate-Smart Agricultural Principles and Practices | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Outcome Indicators** | **Unit of Measure** | **Baseline** | **Cumulative Target Value** | | | | | | **Frequency** | **Data Source/ Methodology** | **Responsibility for data collection** | **Description of Indicator** |
| | | | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | | | | |
| | | | | | | | | | | - Renewable energy installation project records.<br>- Farmer cooperative reports and usage logs. | - Agricultural Extension Services. | |

### 13.2.2 JSAIPA 2: Market-Driven Agricultural Value Chains and Trade

| Outcome 2.1: Strengthened Agricultural Value Chains | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Outcome Indicators** | **Unit of Measure** | **Baseline** | **Cumulative Target Value** | | | | | | **Frequency** | **Data Source/ Methodology** | **Responsibility for data collection** | **Description of Indicator** |
| | | | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | | | | |
| OI.2.1.1: Increased number of functional value chain clusters | # of functional value chain clusters | 5 clusters | 7 | 9 | 11 | 13 | 15 | 17 | Annual | - Reports from programs e.g. (FADAMA III and Anchor Borrowers' Program)<br>- NIRSAL (Nigeria Incentive-Based Risk Sharing System for Agricultural Lending) | - Jigawa State Ministry of Agriculture and Rural Development.<br>- Jigawa Agricultural Development Program (JARDA).<br>- Value Chain Cluster Coordinators. | Functional value chain clusters refer to organized and geographically concentrated groups of producers, processors, and marketers working together to enhance agricultural value addition and market linkages. *(A cluster becomes **functional** when it demonstrates improved collaboration, productivity, and access* |

Outcome 2.1: Strengthened Agricultural Value Chains

| Outcome Indicators | Unit of Measure | Baseline | Cumulative Target Value | | | | | | Frequency | Data Source/ Methodology | Responsibility for data collection | Description of Indicator |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | | | | |
| | | | | | | | | | | progress reports.<br>- Value chain mapping reports from Jigawa Agricultural Development Program (Jigawa ADP).<br>- Surveys from farmer cooperatives and agribusiness associations. | - Private Agribusiness Partners. | *to markets for specific crops like rice, wheat, sesame, and groundnuts in Jigawa State)* |
| OI.2.1.2: Percentage growth in the adoption of modern value chain practices | % of value chain actors adopting modern practices | TBD | TBD | TBD | TBD | TBD | TBD | TBD | Annual | - Extension service reports, value chain surveys, partner M&E data | Ministry of Agriculture, JARDA, NGOs | Tracks the increase in value chain actors adopting practices such as digital tools, logistics solutions, and sustainability-focused technologies. |
| OI.2.1.3: Enhanced connectivity between producers, processors, and marketers. | Percentage of actors with operational linkages | 10% | 15% | 20% | 25% | 30% | 40% | 45% | Annual | - Partnership agreements, surveys, supply chain mapping | - Ministry of Agriculture, JARDA, NGOs | This indicator tracks rising sequence of linkages between value chain actors to integrate and be efficient. |

Outcome 2.2: Improved Market Access and Trade Systems

| Outcome Indicators | Unit of Measure | Baseline | Cumulative Target Value | | | | | | Frequency | Data Source/ Methodology | Responsibility for data collection | Description of Indicator |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | | | | |
| OI.2.2.1: Increased participation of farmers in structured trade and commodity exchange platforms | # of farmers participating | 500 | 500 | 550 | 600 | 650 | 700 | 750 | Annual | - Nigerian Commodity Exchange (NCX) records, cooperative reports, state board data | Jigawa State Ministry of Agriculture, NCX, FBOs | Farmers engaged/involved in organized trade platforms to get better price transparency and access to buyers. |
| OI.2.2.2: Higher profitability for farmers due to improved market access and competitive pricing | Percentage (%) increase in income | 0% | 3.33% | 6.66% | 9.99% | 13.32 % | 16.65 % | 20% | Annual | - Income surveys, NIRSAL and CBN reports | JARDA, FBOs, State Ministry of Agriculture | This indicator refers to farmers' net income increase from improved access to markets, competitive pricing, and reduced losses. |
| | | Sesame 1.22 Tons/Ha | 1.25 Ton/ Ha | 1.28 Ton/ Ha | 1.31 Ton /Ha | 1.34 Ton/ Ha | 1.37 Ton/ Ha | 1.40 Ton/ Ha | | | | Indicates the amount of produce harvested per hectare of land cultivated |
| | | Wheat 1.1 Tons/Ha | 1.13 Ton/ Ha | 1.16 Ton/ Ha | 1.19 Ton/ Ha | 1.22 Ton/ Ha | 1.25 Ton/ Ha | 1.28 Ton/ Ha | | | | |
| | | Millet | 1.05 Tons/ Ha | 1.08 Tons/ Ha | 1.11 Tons/ Ha | 1.14 Tons/ Ha | 1.17 Tons/ Ha | 1.20 Tons/ Ha | | | | |
| | | Hibiscus 1.0 Ton/Ha | 1.03 Ton/ Ha | 1.05 Ton/ Ha | 1.08 Ton/ Ha | 1.11 Ton/ Ha | 1.14 Ton/ Ha | 1.17 Ton/ Ha | | | | |
| | | Beef | 121.8 Tons/ Ha | 123.6 Tons/ Ha | 125.5 Tons/ Ha | 127.4 Tons/ Ha | 129.3 Tons/ Ha | 131.2 Tons/ Ha | | | | |
| | | Rice: 2.5 Tons/Ha | 2.65 Tons/ Ha | 2.63 Tons/ Ha | 2.69 Tons/ Ha | 2.76 Tons/ Ha | 2.83 Tons/ Ha | 2.90 Tons/ Ha | | | | |

| Outcome 2.2: Improved Market Access and Trade Systems | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Outcome Indicators** | **Unit of Measure** | **Baseline** | **Cumulative Target Value** | | | | | | **Frequency** | **Data Source/ Methodology** | **Responsibility for data collection** | **Description of Indicator** |
| | | | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | | | | |
| OI.2.2.3: Growth in exports of agricultural products through better market linkages | Percentage (%) increase in export value of agricultural products. | 10% | 10% | 12% | 14% | 16% | 18% | 20% | Annual | - Nigerian Export Promotion Council *(NEPC)* reports, customs data, export facilitation reports | - Jigawa Ministry of Trade, NEPC, Export Associations | Annual export volume of agricultural products achieved through better logistics, trade policies, and market access. |

| Outcome 2.3: Adoption of Agricultural Innovations and Technology | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Outcome Indicators** | **Unit of Measure** | **Baseline** | **Cumulative Target Value** | | | | | | **Frequency** | **Data Source/ Methodology** | **Responsibility for data collection** | **Description of Indicator** |
| | | | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | | | | |
| OI.2.3.1: Increase in the number of farmers using digital platforms for market access and input procurement | # of farmers using digital platforms | 5% | 10% | 15% | 20% | 25% | 30% | 35% | Annual | - Digital platform records, telecoms data, app reports | Jigawa State Ministry of Agriculture, FBOs, Agritech Firms | Farmers adopting digital tools for markets, input purchases, and advisory services. |
| OI.2.3.2: Enhanced availability of mechanized and technology-driven solutions for production and post-harvest handling | # of solutions deployed/adopted | 30% adoption | 33.33 % | 36.66 % | 39.99 % | 43.32 % | 46.65 % | 50% | Annual | - Machinery provider records, state mechanization data | Ministry of Agriculture, Private Sector, JARDA | Mechanized tools and tech deployed to improve production efficiency and reduce post-harvest losses |
| | # of Yields as a result of mechanized tools deployed/adopted | 0.88–1.26 Tons/Ha | 1.14 Tons/ Ha | 1.21 Tons/ Ha | 1.29 Tons/ Ha | 1.36 Tons/ Ha | 1.43 Tons/ Ha | 1.5 Tons/ Ha | | | | |

### 13.2.3 JSAIPA 3: Agro-Industrialization and Mechanization

| Outcome 3.1: Accelerated Agro-Industrialization | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Outcome Indicators** | **Unit of Measure** | **Baseline** | **Cumulative Target Value** | | | | | | **Frequency** | **Data Source/ Methodology** | **Responsibility for data collection** | **Description of Indicator** |
| | | | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | | | | |
| OI.3.1.1: Increase in the number of agro-processing industries established in the state | # of agro-processing industries established | 12 | 16 | 19 | 22 | 28 | 30 | 12 | Annual | - Ministry records, CAC registrations, industrial surveys | - Jigawa Ministry of Trade, Investment Promotion Agency | Tracks the establishment of new industries to boost value addition, employment, and reduce post-harvest losses. |
| OI.3.1.2: Growth in private-sector investment in agro-industrial projects | Percentage (%) increase in private-sector investment (NGN/USD) | $50 million | $80 million | $100 million | $120 million | $170 million | $200 million | $50 million | Annual | - Investment reports, financial institution data | - Ministry of Trade, Investment Promotion Agency | Tracks private-sector monetary investments in agro-industrial ventures, reflecting economic growth. |
| OI.3.1.3: Improved contribution of agro-industrial activities to state GDP | Percentage (%) contribution to state GDP | 15% | 15.83 % | 16.67 % | 17.50 % | 18.33 % | 19.13 % | 20% | Annual | - NBS GDP reports, sectoral contribution assessments | - Ministry of Finance, Industrial Development Authority | Measures the economic impact of agro-industrial activities on Jigawa's overall GDP. |

| Outcome 3.2: Expanded Mechanization in Agriculture | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Outcome Indicators** | **Unit of Measure** | **Baseline** | **Cumulative Target Value** | | | | | | **Frequency** | **Data Source/ Methodology** | **Responsibility for data collection** | **Description of Indicator** |
| | | | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | | | | |
| OI.3.2.1: Increased proportion of farms utilizing mechanized equipment for planting, harvesting, and processing | Percentage (%) of farms using mechanized equipment | 20% | 20% | 25% | 30% | 35% | 40% | 45% | Annual | - Mechanization survey, FBO reports, mechanization service provider data | - Ministry of Agriculture, JARDA, FBOs | Tracks the adoption of mechanization services and tools by farms to improve labour efficiency and productivity. |

| Outcome 3.2: Expanded Mechanization in Agriculture | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Outcome Indicators** | **Unit of Measure** | **Baseline** | **Cumulative Target Value** | | | | | | **Frequency** | **Data Source/ Methodology** | **Responsibility for data collection** | **Description of Indicator** |
| | | | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | | | | |
| OI.3.2.2: Higher yields and efficiency through the adoption of mechanized practices | Average yield (Metric tons per Hectare) | 1.56 MT/ha | 1.63 MT/ha | 1.71 MT/ ha | 1.78 MT/ha | 1.85 MT/ ha | 1.93 MT/ha | 2.0 MT/ha | Annual | - Yield surveys, extension service data, FBO reports | - Ministry of Agriculture, JARDA, Development Partners | Tracks increases in crop yields per hectare as a result of mechanized practices, reflecting improved efficiency. |

| Outcome 3.3: Strengthened Agricultural Financing Mechanisms | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Outcome Indicators** | **Unit of Measure** | **Baseline** | **Cumulative Target Value** | | | | | | **Frequency** | **Data Source/ Methodology** | **Responsibility for data collection** | **Description of Indicator** |
| | | | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | | | | |
| OI.3.3.1: Growth in the number of farmers and agro industrialists accessing innovative financing mechanisms | # of individuals accessing innovative financing mechanisms | TBD | TBD | TBD | TBD | TBD | TBD | TBD | Annual | - Bank reports, financial programs, FBO surveys | - Ministry of Agriculture, Banks, Development Partners | Tracks the expansion of access to credit, loans, and other innovative financing methods for agricultural stakeholders. |
| OI.3.3.2: Percentage increase in funding allocated to agricultural industrialization projects | Percentage (%) increase in funding | TBD | TBD | TBD | TBD | TBD | TBD | TBD | Annual | - Budget reports, PPP financing data | - Ministry of Finance, Development Banks, Investors | Measures growth in financial resources dedicated to agricultural industrialization activities, reflecting sector prioritization. |

## 13.2.4 JSAIPA 4: Policy, Governance, and Institutional Strengthening

| Outcome 4.1: Strengthened Governance and Coordination | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Outcome Indicators** | **Unit of Measure** | **Baseline** | **Cumulative Target Value** | | | | | | **Frequency** | **Data Source/ Methodology** | **Responsibility for data collection** | **Description of Indicator** |
| | | | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | | | | |
| OI.4.1.1: Increased collaboration among inter-governmental and institutional stakeholders | # of collaborative initiatives | 5 | 9 | 11 | 13 | 18 | 20 | 5 | Annual | - Meeting reports, MOUs, joint program records | - Ministry of Agriculture, LGAs, Development Partners | Tracks the formation and operationalization of partnerships and programs between government and institutional stakeholders. |
| OI.4.1.2: Establishment of frameworks for seamless policy implementation | # of frameworks | TBD | TBD | TBD | TBD | TBD | TBD | TBD | Annual | - Policy documents, training reports, M&E structures | - Ministry of Agriculture, Policy Committees | Tracks the development of actionable frameworks that streamline policy implementation and ensure effective governance |

| Outcome 4.2: Increased Gender and Youth Inclusion | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Outcome Indicators** | **Unit of Measure** | **Baseline** | **Cumulative Target Value** | | | | | | **Frequency** | **Data Source/ Methodology** | **Responsibility for data collection** | **Description of Indicator** |
| | | | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | | | | |
| OI.4.2.1: Higher participation of women and youth in agricultural activities across the value chain | Percentage (%) of women and youth engaged | 25% | 25% | 30% | 35% | 40% | 45% | 50% | Annual | - FBO surveys, government reports, program data | - Ministry of Women Affairs, Ministry of Agriculture | Measures the participation of women and youth in all aspects of the agricultural value chain. |
| OI.4.2.2: Increase in programs tailored to vulnerable groups within the agricultural sector | # of programs targeting vulnerable groups | TBD | TBD | TBD | TBD | TBD | TBD | TBD | Annual | - Program reports, development partner data | - Ministry of Agriculture, Development Organizations | Tracks the number of agricultural programs designed to support vulnerable groups, enhancing inclusivity. |

| Outcome 4.3: Comprehensive Financing Mechanisms | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Outcome Indicators** | **Unit of Measure** | **Baseline** | **Cumulative Target Value** | | | | | | **Frequency** | **Data Source/ Methodology** | **Responsibility for data collection** | **Description of Indicator** |
| | | | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | | | | |
| OI.4.3.1: Development of innovative financing models for agriculture | # of financing models | TBD | TBD | TBD | TBD | TBD | TBD | TBD | Annual | - Bank reports, government and development partner data | - Ministry of Finance, CBN, Development Partners | Tracks the creation and implementation of innovative financing mechanisms tailored for agriculture. |
| OI.4.3.2: Increased access to credit for smallholder farmers, agribusinesses, and agro-industrialists | Percentage (%) of beneficiaries accessing credit | TBD | TBD | TBD | TBD | TBD | TBD | TBD | Annual | - Loan records, cooperative reports, program surveys | - Ministry of Finance, Ministry of Agriculture | Measures the proportion of agricultural stakeholders accessing credit for production, processing, or trade. |

## 13.3 Program Prioritisation Ranking Sheets

### 13.3.1 Hibiscus Processing Plant

| **Ranking Criteria** | | | **Program Score** | **Rationale** |
|---|---|---|---|---|
| **Attractiveness** | **Impact** | Food Security | 4 | Jigawa being a major producer of hibiscus flowers can ensure a steady supply of raw materials and food security. |
| | | Job Creation & Women Empowerment | 4 | Will create indirect or direct jobs for locals hence improve their livelihood. |
| | | Local Resource Utilisation/Efficiency | 5 | Nigeria's Hibiscus products are in high demand globally and can assist to reduce its reliance on imported hibiscus products making savings on foreign exchange. |

| Ranking Criteria | | | Program Score | Rationale |
|---|---|---|---|---|
| | **Opportunity** | Security | 4 | The state has a relatively low crime rate providing a stable environment for investment. It equally has a history of peaceful coexistence among its diverse ethnic and religious groups reducing conflict risk. |
| | | Market Opportunity | 5 | Jigawa State has a large market for hibiscus products with opportunities for expansion. |
| | | Active Investor Interest | 5 | The global demand for hibiscus product is increasing and establishing an industry in the state can tap into this growing demand and expand market opportunities. |
| **Feasibility** | **Capability** | Natural Endowments | 5 | The state is blessed with suitable climate and soil conditions for cultivation, reducing production cost. |
| | | Skills/Labour | 5 | Contributes to community development by provision of training and capacity building programs for community local dairy farmers. |
| | | Access to Land/Infrastructure | 5 | State has vast arable land which is quite affordable and also has developed industrial estates with necessary infrastructure |
| | **Readiness** | Ease of Removing Barriers | 4 | There are streamlined licensing processes, clear guidelines and regulations resulting minimal regulatory hurdles. |
| | | Support for Sub-Sector Incentives | 5 | The state offers tax incentives, investment Grants and subsidies and Infrastructure Support by allocating Industrial land. |
| | | Political Will | 5 | The state government has demonstrated commitment to supporting the development of the hibiscus industry and has established a supportive policy framework |
| **Viability** | **Economic Soundness** | Profitability and ROI Potential | 4 | There is an increase in global demand, growing domestic market driven by increasing consumer awareness and demand. Nigeria can also export hibiscus products to other countries thus generating foreign exchange. |

| Ranking Criteria | | | Program Score | Rationale |
|---|---|---|---|---|
| | | Cost Effectiveness | 4 | Exceptional cost efficiency by utilizing and modernizing existing resources. |
| | | Funding Availability and Accessibility | 5 | The state has attracted private equity investments in the agricultural sector which can be leveraged to support the hibiscus industry. |
| | | Financial Risk Profile | 4 | The global demand for hibiscus products is increasing ensuring a high ROI for investors. |
| | | **Overall Ranking** | **4.564** | |

### 13.3.2 Rehabilitation and Modernization of Existing Irrigation Systems

| Ranking Criteria | | | Program Score | Rationale |
|---|---|---|---|---|
| **Attractiveness** | **Impact** | Food Security | 5 | Modernized irrigation will expand irrigated land, significantly improving food production. |
| | | Job Creation & Women Empowerment | 4 | Creates jobs in construction and long-term management, with moderate opportunities for women. |
| | | Local Resource Utilisation/Efficiency | 5 | Optimal use of existing dams and water resources enhances efficiency. |
| | **Opportunity** | Security | 4 | Increases water access for irrigation, reducing resource-related conflicts. |
| | | Market Opportunity | 5 | Strong demand for irrigated crops locally and regionally. |
| | | Active Investor Interest | 4 | High interest from public-private partnerships due to ROI potential. |

| Ranking Criteria | | | Program Score | Rationale |
|---|---|---|---|---|
| **Feasibility** | **Capability** | Natural Endowments | 5 | Leverages existing dams and fertile land. |
| | | Skills/Labour | 4 | Skilled labour is locally available, requiring minimal specialized training. |
| | | Access to Land/Infrastructure | 5 | Existing irrigation infrastructure provides a strong foundation for expansion. |
| | **Readiness** | Ease of Removing Barriers | 4 | Some logistical challenges in rehabilitation and coordination with stakeholders. |
| | | Support for Sub-Sector Incentives | 5 | Strong alignment with government agricultural policies. |
| | | Political Will | 5 | High state government priority due to food security implications. |
| **Viability** | **Economic Soundness** | Profitability and ROI Potential | 5 | High ROI due to efficiency gains and expanded productivity. |
| | | Cost Effectiveness | 5 | Exceptional cost efficiency by utilizing and modernizing existing resources. |
| | | Funding Availability and Accessibility | 4 | Good access to donor funding and public-private partnerships. |
| | | Financial Risk Profile | 4 | Moderate financial risks, mitigated by strong government backing. |
| | | **Overall Ranking** | **4.563** | |

## 13.3.3 Large-Scale Sesame Oil Extracting Plant

| Ranking Criteria | | | Program Score | Rationale |
|---|---|---|---|---|
| **Attractiveness** | **Impact** | Food Security | 4 | The industry can increase domestic production of sesame oil, improving food availability and reducing shortages |
| | | Job Creation & Women Empowerment | 4 | Creates jobs contributing to poverty reduction and economic growth. Women play a significant role in farming and processing thus the plant provides the opportunities for women to engage in economic activities empowering their status. |
| | | Local Resource Utilisation/Efficiency | 4 | Jigawa has abundant supply of sesame seeds providing a readily available raw material for the industry |
| | **Opportunity** | Security | 3 | Jigawa has a relatively low crime rate. Besides, Nigeria has investment protection laws which safeguard foreign and local investments |
| | | Market Opportunity | 5 | Can export sesame oil to international markets earning foreign exchange and boosting Nigeria's economy. |
| | | Active Investor Interest | 5 | Sesame oil is in high demand globally. |
| **Feasibility** | **Capability** | Natural Endowments | 5 | The state has sesame-friendly climate with adequate rainfall, temperature and fertile soil rich in nutrients suitable for sesame cultivation. |
| | | Skills/Labour | 5 | Training and capacity-building programs will ensure transfer of new skills to staff |
| | | Access to Land/Infrastructure | 5 | State has adequate land availability, water supply and access to irrigation facilities |

| Ranking Criteria | | | Program Score | Rationale |
|---|---|---|---|---|
| | **Readiness** | Ease of Removing Barriers | 4 | There are streamlined licensing processes, clear guidelines and regulations resulting minimal regulatory hurdles. |
| | | Support for Sub-Sector Incentives | 4 | The state offers tax incentives, investment Grants and subsidies and Infrastructure Support by allocating Industrial land. |
| | | Political Will | 5 | Strong alignment with government agricultural policies. |
| **Viability** | **Economic Soundness** | Profitability and ROI Potential | 5 | Nigeria has a growing demand for sesame oil, driven by its nutritional and medicinal benefits. Its also in high demand from food processors |
| | | Cost Effectiveness | 5 | State has abundant supply of sesame seeds thus reducing raw material costs. The local farmers offer competitive pricing further reducing material cost |
| | | Funding Availability and Accessibility | 5 | Good access to donor funding and public-private partnerships. |
| | | Financial Risk Profile | 4 | Requires relatively low initial investment and there's a favourable business environment with proximity to raw materials providing a competitive advantage, increasing the potential for high returns. |
| | | **Overall Ranking** | **4.500** | |

### 13.3.4 Development of New Irrigation Projects

| Ranking Criteria | | | Program Score | Rationale |
|---|---|---|---|---|
| **Attractiveness** | **Impact** | Food Security | 5 | Increases food production significantly by irrigating 15,000 hectares. |

| Ranking Criteria | | | Program Score | Rationale |
|---|---|---|---|---|
| | | Job Creation & Women Empowerment | 5 | Creates numerous jobs in construction and farming, with potential for women's involvement. |
| | | Local Resource Utilisation/Efficiency | 4 | High efficiency but dependent on advanced technologies. |
| | **Opportunity** | Security | 4 | Stabilizes agricultural production in remote areas, reducing reliance on rain-fed systems. |
| | | Market Opportunity | 5 | Strong demand for crops grown using modern irrigation. |
| | | Active Investor Interest | 4 | Growing interest from donors and agribusinesses. |
| **Feasibility** | **Capability** | Natural Endowments | 5 | Untapped water sources and fertile land are readily available. |
| | | Skills/Labour | 4 | Skilled labour requires some training in advanced irrigation technologies. |
| | | Access to Land/Infrastructure | 4 | Adequate land, with infrastructure development needed. |
| | **Readiness** | Ease of Removing Barriers | 3 | Infrastructure challenges and regulatory approvals may delay implementation. |
| | | Support for Sub-Sector Incentives | 5 | Fully aligned with agricultural expansion policies. |
| | | Political Will | 5 | Strong government support for new projects. |

| Ranking Criteria | | | Program Score | Rationale |
|---|---|---|---|---|
| **Viability** | **Economic Soundness** | Profitability and ROI Potential | 5 | High ROI due to water-use efficiency and high-value crop potential. |
| | | Cost Effectiveness | 4 | Significant upfront costs but long-term benefits justify investment. |
| | | Funding Availability and Accessibility | 4 | Moderate donor and private investor interest. |
| | | Financial Risk Profile | 4 | Manageable risks with proper planning. |
| | | **Overall Ranking** | **4.375** | |

### 13.3.5 Combined Wheat Milling and Processing Factory

| Ranking Criteria | | | Program Score | Rationale |
|---|---|---|---|---|
| **Attractiveness** | **Impact** | Food Security | 4 | Increases the availability of wheat products enhancing food security and reducing risk of hunger. |
| | | Job Creation & Women Empowerment | 4 | Creates employment opportunities directly and indirectly contributing to poverty reduction and economic growth. Farmers and entrepreneurs can increase their income, improving their standard of living. |
| | | Local Resource Utilisation/Efficiency | 4 | Exceptional cost efficiency by utilizing and modernizing existing resources. |
| | **Opportunity** | Security | 3 | The state has a relatively low crime rate providing a stable environment for investment. It equally has a history of peaceful coexistence among its diverse ethnic and religious groups reducing conflict risk. |

| Ranking Criteria | | | Program Score | Rationale |
|---|---|---|---|---|
| | | Market Opportunity | 4 | Increasing demand due to population growth, urbanization and changing consumer preference |
| | | Active Investor Interest | 5 | International investors have shown interest in investing in the wheat industry being attracted by the state's favourable business environment. |
| **Feasibility** | **Capability** | Natural Endowments | 4 | Jigawa being a major wheat producing area will provide easy access to raw materials and reducing transportation cost. |
| | | Skills/Labour | 5 | Contributes to community development by provision of training and capacity building programs for community local dairy farmers. |
| | | Access to Land/Infrastructure | 5 | State has a relatively well- developed infrastructure, including roads, electricity and water supply making it an ideal location for the combined plant. |
| | **Readiness** | Ease of Removing Barriers | 4 | There are streamlined licensing processes, clear guidelines and regulations resulting minimal regulatory hurdles. |
| | | Support for Sub-Sector Incentives | 4 | The state offers tax incentives, investment Grants and subsidies and Infrastructure Support by allocating Industrial land. |
| | | Political Will | 5 | The state government has demonstrated commitment to supporting the development of the hibiscus industry and has established a supportive policy framework |
| **Viability** | **Economic Soundness** | Profitability and ROI Potential | 4 | Nigeria can reduce its reliance on imported wheat products making savings on foreign exchange. |
| | | Cost Effectiveness | 4 | Plant will strive to reduce energy consumption using energy-efficient practices and equipment. |

| Ranking Criteria | | | Program Score | Rationale |
|---|---|---|---|---|
| | | Funding Availability and Accessibility | 5 | Jigawa State has established PPP models that enable private sector investors to partner with government to develop infrastructure and provide services. The PPPs provide risk sharing mechanisms that enables private sector investors to manage risk and increase ROI. |
| | | Financial Risk Profile | 4 | Nigeria's growing demand for wheat products driven by increasing consumer demand for value-added wheat product |
| | | **Overall Ranking** | **4.250** | |

### 13.3.6 Renewable Energy Integration for Irrigation

| Ranking Criteria | | | Program Score | Rationale |
|---|---|---|---|---|
| **Attractiveness** | **Impact** | Food Security | 4 | Supports year-round farming by reducing energy costs for irrigation. |
| | | Job Creation & Women Empowerment | 3 | Limited direct job creation but long-term benefits for farmers. |
| | | Local Resource Utilisation/Efficiency | 5 | High efficiency through solar and renewable energy. |
| | **Opportunity** | Security | 4 | Enhances resource stability and energy access. |
| | | Market Opportunity | 4 | Supports high-value crop markets with lower energy costs. |

| Ranking Criteria | | | Program Score | Rationale |
|---|---|---|---|---|
| | | Active Investor Interest | 4 | Strong interest from renewable energy sectors. |
| **Feasibility** | **Capability** | Natural Endowments | 4 | Abundant solar energy in Jigawa State. |
| | | Skills/Labour | 3 | Requires specialized skills for installation and maintenance. |
| | | Access to Land/Infrastructure | 5 | Existing infrastructure is compatible with solar integration. |
| | **Readiness** | Ease of Removing Barriers | 4 | Minimal barriers for renewable energy projects. |
| | | Support for Sub-Sector Incentives | 5 | Fully aligned with energy transition policies. |
| | | Political Will | 5 | Strong political support for renewable energy initiatives. |
| **Viability** | **Economic Soundness** | Profitability and ROI Potential | 5 | High ROI through operational cost reductions. |
| | | Cost Effectiveness | 5 | Exceptional cost efficiency with long-term benefits. |
| | | Funding Availability and Accessibility | 4 | Strong donor and private funding interest. |
| | | Financial Risk Profile | 4 | Low financial risks with predictable cost savings. |
| | | **Overall Ranking** | **4.250** | |

### 13.3.7 Development of Renewable energy powered mechanized Agricultural Equipment Processing Hub

| Ranking Criteria | | | Program Score | Rationale |
|---|---|---|---|---|
| **Attractiveness** | **Impact** | Food Security | 5 | Modernized and mechanized agricultural cultivation, management and processing methods will increase food production |
| | | Job Creation & Women Empowerment | 4 | It creates jobs for the operators of the equipment and women can be more active in small scale farming and equipment operations |
| | | Local Resource Utilisation/Efficiency | 5 | use of local labour during construction creates some level of local content |
| | **Opportunity** | Security | 4 | Increase in food and agric business ventures reduces crime |
| | | Market Opportunity | 5 | There is a high demand for equipment for lease as this makes life easier |
| | | Active Investor Interest | 4 | processing hubs and equipment leasing and use creates ease for investors |
| **Feasibility** | **Capability** | Natural Endowments | 5 | Solar irradiance is high in Jigawa making it a good source for Solar power |
| | | Skills/Labour | 4 | Skilled labour is available, and training is not complex |
| | | Access to Land/Infrastructure | 5 | There is sufficient land space to build processing hubs and equipment leasing for farm use are requires no space |

| Ranking Criteria | | | Program Score | Rationale |
|---|---|---|---|---|
| | **Readiness** | Ease of Removing Barriers | 4 | Agreements by local communities to build processing hubs is not complex if the people, see the benefits |
| | | Support for Sub-Sector Incentives | 4 | It is in alignment with government agricultural policies. |
| | | Political Will | 5 | High state government priority due to food security implications. |
| **Viability** | **Economic Soundness** | Profitability and ROI Potential | 4 | High ROI due to efficiency gains and expanded productivity. |
| | | Cost Effectiveness | 4 | Initial cost may be high but operational cost is quite low |
| | | Funding Availability and Accessibility | 3 | Public-Private Partnerships (PPPs) and state government contributions. |
| | | Financial Risk Profile | 3 | Moderate financial risks, mitigated by strong government backing. |
| | | **Overall Ranking** | **4.250** | |

### 13.3.8 Slaughterhouse, Meat Processing and Value-Added Plant

| Ranking Criteria | | | Program Score | Rationale |
|---|---|---|---|---|
| **Attractiveness** | **Impact** | Food Security | 5 | Improves food security by ensuring steady supply and increasing availability of meat products hence reducing reliance on imports |

| Ranking Criteria | | | Program Score | Rationale |
|---|---|---|---|---|
| | | Job Creation & Women Empowerment | 4 | Create employment opportunities for local communities. |
| | | Local Resource Utilisation/Efficiency | 4 | By utilizing local resources, the industry can reduce carbon footprint, minimizing the environmental impact of transportation, and promoting sustainability. |
| | **Opportunity** | Security | 4 | Ensuring the security of the food supply chain prevents contamination, ensures safe and healthy meat products for human consumption. |
| | | Market Opportunity | 5 | The strategic location of the state near major markets provides easy access to a large consumer base. |
| | | Active Investor Interest | 4 | The growing population and increasing demand for meat products in Nigeria creates a significant market opportunity for investors |
| **Feasibility** | **Capability** | Natural Endowments | 5 | The state's vast livestock resources provide a readily available source of raw materials for meat processing and value-added products |
| | | Skills/Labour | 5 | Contributes to community development by provision of training and capacity building programs for community locals. |
| | | Access to Land/Infrastructure | 4 | The state offers low-cost production options including affordable land, labour and raw materials and it has invested in infrastructure development |
| | **Readiness** | Ease of Removing Barriers | 3 | There are streamlined licensing processes, clear guidelines and regulations resulting minimal regulatory hurdles. |

| Ranking Criteria | | | Program Score | Rationale |
|---|---|---|---|---|
| | | Support for Sub-Sector Incentives | 4 | The state offers tax incentives, investment Grants and subsidies and Infrastructure Support by allocating Industrial land. |
| | | Political Will | 4 | The state has developed an Agricultural Policy with strategies to support the development of the industry. |
| **Viability** | **Economic Soundness** | Profitability and ROI Potential | 4 | The combination of low costs, high demand and government support creates a high ROI potential for investors in the industry. |
| | | Cost Effectiveness | 4 | Jigawa state has a competitive labour market with lower labour cost, vast livestock population providing a readily available and affordable source of raw materials. |
| | | Funding Availability and Accessibility | 4 | Jigawa State has established PPP models that enable private sector investors to partner with government to develop infrastructure and provide services. The PPPs provide risk sharing mechanisms that enables private sector investors to manage risk and increase ROI. |
| | | Financial Risk Profile | 4 | The State has allocated funds for agricultural development and offers investment incentives to support growth of the sector. |
| | | **Overall Ranking** | **4.188** | |

## 13.3.9 Biofuel Processing Plant

| Ranking Criteria | | | Program Score | Rationale |
|---|---|---|---|---|
| **Attractiveness** | **Impact** | Food Security | 3 | The industry can support agricultural development, improving food security through increased agricultural productivity. |
| | | Job Creation & Women Empowerment | 5 | Create employment in agricultural sector, processing industry and related support services. |
| | | Local Resource Utilisation/Efficiency | 5 | The industry can utilize agricultural waste such as crop residues to produce biofuels in turn reducing waste and promoting sustainable agriculture |
| | **Opportunity** | Security | 3 | The state has a relatively low crime rate providing a stable environment for investment. It equally has a history of peaceful coexistence among its diverse ethnic and religious groups reducing conflict risk. |
| | | Market Opportunity | 5 | Biofuel feedstock procurement provides a new revenue stream for farmers enhancing their livelihood. |
| | | Active Investor Interest | 5 | The global demand for biofuels is increasing driven by climate change and energy security concerns |
| **Feasibility** | **Capability** | Natural Endowments | 4 | Stimulates rural development by providing economic opportunities in agricultural regions. |
| | | Skills/Labour | 4 | There are abundance skilled and unskilled labour with agricultural expertise essential for feedstock cultivation and harvesting with a strong labour workforce that can be trained and employed in various aspects of biofuel production. |
| | | Access to Land/Infrastructure | 5 | State has designated industrial areas, providing a conducive environment, offers infrastructure support, including roads, utilities and security services within these industrial areas. |

| Ranking Criteria | | | Program Score | Rationale |
|---|---|---|---|---|
| | **Readiness** | Ease of Removing Barriers | 3 | There are streamlined licensing processes, clear guidelines and regulations resulting minimal regulatory hurdles. |
| | | Support for Sub-Sector Incentives | 4 | Investors can partner with local farmers to secure feedstocks, providing a reliable source of raw materials |
| | | Political Will | 5 | Supports Nigeria's National Energy Policy to transition to renewable energy sources |
| **Viability** | **Economic Soundness** | Profitability and ROI Potential | 4 | Biofuel Processing Plant can provide high returns on investment driven by growing demand and government incentives |
| | | Cost Effectiveness | 4 | State has access to renewable energy sources resulting in energy cost reduction and the industry shall utilize energy-efficient equipment also minimizing energy consumption |
| | | Funding Availability and Accessibility | 4 | Biofuel plants require significant capital investment in equipment, infrastructure and feedstock procurement and Investors can readily access the various funding and financing options to meet the high financial demand |
| | | Financial Risk Profile | 4 | The industry can produce multiple products and by-products diversifying the revenue stream and can also explore export opportunities generating foreign exchange earnings |
| | | **Overall Ranking** | **4.188** | |

### 13.3.10 Market-oriented hibiscus production

| Ranking Criteria | | | Program Score | Rationale |
|---|---|---|---|---|
| **Attractiveness** | **Impact** | Food Security | 3 | Hibiscus sabdariffa, commonly known as hibiscus or roselle, is an essential food, fibre, and medicinal plant that can tolerate a variety of environmental conditions. It serves as an alternative crop that can be used as a protein source in both human and animal feed production. The flowers, leaves, and seeds of hibiscus contain a significant number of bioactive compounds, which are important for human and animal health. Approximately 85% of households in Jigawa consume hibiscus, either as a whole meal or in homemade drinks. |
| | | Job Creation & Women Empowerment | 5 | Jigawa is the natural habitat for five varieties of hibiscus and is among the world's top producers and suppliers of this crop. Approximately 65% of smallholder farmers engage in hibiscus production, while 90% of those involved in processing and marketing are women and youth. Hibiscus production and processing are having a significant impact on rural communities. Farmers cultivating hibiscus flowers are expanding their farming areas to increase their yield, as demand continues to rise. The growing demand for this crop in the global market has created additional job opportunities for vulnerable groups in Jigawa State. |
| | | Local Resource Utilisation/Efficiency | 4 | One hundred percent of the input required for hibiscus production are sourced locally within the state. A vast area of the state is semi-arid, which typically supports the cultivation of crops like hibiscus that have low nutrient requirements. The climatic and soil conditions in communities such as Maigatari, Babura, Suletankarkar, Garki, Malammadori, and Kaugama are conducive to hibiscus production. |

| Ranking Criteria | | | Program Score | Rationale |
|---|---|---|---|---|
| | **Opportunity** | Security | 5 | As with all sectors, there is both security in the production of hibiscus and in its marketing. Exporters from across the country visit Jigawa State to source hibiscus. |
| | | Market Opportunity | 5 | Approximately 80% of Nigerian hibiscus is destined for the export market, while only about 20% is consumed locally, primarily as a drink known as zobo. There is significant demand for hibiscus flowers in countries like Mexico, Canada, and the USA. The global supply deficit presents a market opportunity for producers and exporters in Jigawa State. The market share of hibiscus is expected to grow from $178.97 million in 2023 to $263 million by 2029, reflecting a compound annual growth rate (CAGR, 2024). |
| | | Active Investor Interest | 4 | There is active participation of private investors like Gombella, Globexia, TUUNS Limited, Axonn Links Limited, Majestic farms and many exporters from Kano in Jigawa State. |
| **Feasibility** | **Capability** | Natural Endowments | 3 | Jigawa State is well-endowed with a favourable climate and land suitable for hibiscus production. The plant is also a good source of animal feed. |
| | | Skills/Labour | 4 | Farmers in Jigawa State have been engaged in hibiscus production for many years, and they possess the necessary skills to cultivate this commodity. Additionally, many individuals involved in hibiscus handling have acquired the essential skills for postharvest processing and marketing. |
| | | Access to Land/Infrastructure | 5 | Jigawa State is the first state in the country to fully adopt the principles of Responsible Agriculture Investment (RAI). The implementation has led to the development of Land Acquisition and Resettlement Framework which provides guidelines for the acquisition of land for large scale agriculture and ensures that rights of all land users are adequately protected thereby improving investor confidence in the process |

| Ranking Criteria | | | Program Score | Rationale |
|---|---|---|---|---|
| | **Readiness** | Ease of Removing Barriers | 4 | Most of the constraints limiting the development of the hibiscus value chain can be addressed by implementing the following recommendations: forming a hibiscus producer cooperative, providing farmers with high-yielding varieties, and promoting best agronomic practices for production and postharvest handling will significantly increase both the acreage and yield of hibiscus. Additionally, establishing quality parameters to guide the production and marketing of hibiscus flowers is essential. Finally, building a bulking centre in production clusters will facilitate the implementation of quality control measures. |
| | | Support for Sub-Sector Incentives | 4 | Currently, there is limited government support for the sector both in the state and across the country. |
| | | Political Will | 3 | The recent hibiscus summit organised by the Jigawa State Investment and Promotion Agency and the intended partnership with Axonn Links limited to build a bulking Centre for hibiscus shows the level of Government commitment in the hibiscus subsector. |
| **Viability** | **Economic Soundness** | Profitability and ROI Potential | 4 | Highly profitable with significant return per Naira invested. |
| | | Cost Effectiveness | 5 | Moderately low capital investment is required for the sector |
| | | Funding Availability and Accessibility | 4 | There is no funding window for hibiscus production in the State |
| | | Financial Risk Profile | 5 | Moderate financial risks due to high upfront costs. |
| | | **Overall Ranking** | **4.188** | |

### 13.3.11 Irrigation Support for Grazing Reserves

| Ranking Criteria | | | Program Score | Rationale |
|---|---|---|---|---|
| **Attractiveness** | **Impact** | Food Security | 5 | Ensures year-round fresh grass availability, enhancing livestock productivity. |
| | | Job Creation & Women Empowerment | 4 | Employment opportunities in installation and maintenance of sprinkler systems. |
| | | Local Resource Utilisation/Efficiency | 5 | Efficient use of solar energy and water resources. |
| | **Opportunity** | Security | 5 | Reduces conflict over grazing resources. |
| | | Market Opportunity | 4 | Supports livestock markets with improved productivity. |
| | | Active Investor Interest | 3 | Moderate interest from private investors for livestock projects. |
| **Feasibility** | **Capability** | Natural Endowments | 4 | Utilizes grazing reserves with suitable water access. |
| | | Skills/Labour | 3 | Requires skilled labour for system installation. |
| | | Access to Land/Infrastructure | 4 | Grazing reserves provide readily available land. |
| | **Readiness** | Ease of Removing Barriers | 4 | Minor regulatory adjustments required. |

| Ranking Criteria | | | Program Score | Rationale |
|---|---|---|---|---|
| | | Support for Sub-Sector Incentives | 5 | Strong alignment with livestock development policies. |
| | | Political Will | 5 | Strong state government support for grazing improvements. |
| **Viability** | **Economic Soundness** | Profitability and ROI Potential | 4 | Moderate ROI with significant indirect benefits. |
| | | Cost Effectiveness | 4 | Good efficiency leveraging solar technology. |
| | | Funding Availability and Accessibility | 4 | Availability of donor support and private funding. |
| | | Financial Risk Profile | 4 | Manageable financial risks with strategic planning. |
| | | **Overall Ranking** | **4.188** | |

### 13.3.12 Market-oriented sesame production

| Ranking Criteria | | | Program Score | Rationale |
|---|---|---|---|---|
| **Attractiveness** | **Impact** | Food Security | 4 | Sesame is a cash crop that can provide income for small-scale farmers to support their families. In 2021, Nigeria was the sixth largest exporter of sesame seeds globally, making it the country's second most lucrative export after cocoa. According to JARDA, in 2024 approximately 45% of farmers cultivate sesame in Jigawa State, and some reasonable percentage consumed it in different forms. |

| Ranking Criteria | | | Program Score | Rationale |
|---|---|---|---|---|
| | | Job Creation & Women Empowerment | 4 | About 50% of the women and youth in sesame production clusters are directly employed along the value chain notably, production, marketing, artisanal sesame cleaning, local oil extraction, making snacks and many more. |
| | | Local Resource Utilisation/Efficiency | 5 | Sesame is produced in all the LGAs of the state. It is tolerant to drought and grow on marginal soils. Large chunks of state arable land are marginal thus. support the production of low nutrients crop off takers. |
| | **Opportunity** | Security | 5 | Agricultural land and investment are highly secured in Jigawa State. |
| | | Market Opportunity | 5 | There is estimated 170 million USD of untapped potential for sesame marketing in Asia particularly China, Japan and Turkey. Growing number of livestock feeds industry and demand for vegetable oils have raised local demand of sesame in Nigeria. |
| | | Active Investor Interest | 3 | Corporate off-takers such as WACOTT and OLAM are currently operating cleaning facilities in the state. Now, there are no companies utilizing sesame seeds as raw materials within the state. However, the existence of wholesale and retail market outlets, along with off-takers from Kano, Kaduna, and Lagos representing OLAM, Grain Cereal, NASCO, and other food and livestock feed mills, indicates promising investment opportunities in the state |
| **Feasibility** | **Capability** | Natural Endowments | 3 | Sesame is an important crop for Nigerian agriculture, as it is extensively cultivated and thrives in relatively poor climatic conditions. It is commonly grown by smallholder farmers in northern Nigeria. The major producing areas, in order of priority, are Nasarawa, Jigawa, and Benue States. The harsh climatic conditions and marginal soils in Jigawa State have favoured sesame seed production across all 27 local government areas (LGAs) of the state. |
| | | Skills/Labour | 4 | Jigawa State is home to a considerable number of skilled sesame producers and artisanal processors. Most value chain actors have accumulated years of experience, making it an attractive destination for sesame investment in Nigeria. However, the sector faces a shortage of skilled labour for industrial |

| Ranking Criteria | | | Program Score | Rationale |
|---|---|---|---|---|
| | | | | processing and cleaning, which can be attributed to insufficient investment in sesame value chain in the State. |
| | | Access to Land/Infrastructure | 5 | Jigawa State has one of the most pragmatic open-access land policies in Nigeria. Land suitable for large-scale crop production is readily available, and investors seeking more than 100 hectares for agricultural purposes can obtain it in less than six months. However, challenges persist in terms of infrastructure, including irrigation facilities, warehouses, aggregation centres, and other facilities. |
| | **Readiness** | Ease of Removing Barriers | 4 | Most of the barriers limiting the development of the sesame value chain in Jigawa State can be easily overcome. Some of the identified constraints include low output per unit area due to a lack of improved seeds, inadequate delivery of extension services, and outdated harvesting methods. Many farmers harvest sesame by pulling the plants, and winnowing is often performed on bare ground, which results in a high level of impurities and reduces both market and export quality. Additionally, poor access to cleaning facilities in most production clusters remains a significant obstacle to the development of the sesame value chain in Jigawa State. |
| | | Support for Sub-Sector Incentives | 4 | The Jigawa State government has collaborated with SG 2000 (Sasakawa Africa Association) to develop the sesame value chain. Approximately 20,000 farmers have been trained in Good Agricultural Practices (GAP). Production inputs, such as agro-chemicals, fertilizers, seeds are available and are sometimes subsidized by the government. |
| | | Political Will | 3 | The sesame value chain is receiving support from both the Jigawa State government and the Federal Government of Nigeria due to the sector's high potential to attract foreign direct investment. Consequently, sesame is one of the value chains that is consistently prioritized by the government in Nigeria. |
| **Viability** | **Economic Soundness** | Profitability and ROI Potential | 4 | Highly profitable with significant return per Naira invested. |

| Ranking Criteria | | | Program Score | Rationale |
|---|---|---|---|---|
| | | Cost Effectiveness | 4 | Moderately low capital investment is required for the sector |
| | | Funding Availability and Accessibility | 4 | Adequate support from state and Federal governments, development partners, and private investors. |
| | | Financial Risk Profile | 5 | Moderate financial risks due to high upfront costs. |
| | | **Overall Ranking** | **4.125** | |

### 13.3.13 Rice value chain development

| Ranking Criteria | | | Program Score | Rationale |
|---|---|---|---|---|
| **Attractiveness** | **Impact** | Food Security | 5 | Rice is one of the most important staple crops in Nigeria. It occupies a strategic position for the achievement of national food security and economic diversification. The per capita consumption of rice per annum is 35kg. These combined with market potentials for rice make it an important component of food security in Nigeria. In Jigawa State like any other parts of Nigeria rice is consumed widely and form part of the cash crop produced among small-holder farmers for agricultural income generation. |
| | | Job Creation & Women Empowerment | 5 | In Jigawa State rice value chain can be used to create reasonable number of jobs because of its series of production, processing and marketing activities occurring along the value chain. Approximately one-third of the farming households in the state are directly involve in rice production with active participation of both youths and women. However, women dominate in activities such as planting/transplanting, harvesting winnowing, parboiling and milling. |

| Ranking Criteria | | | Program Score | Rationale |
|---|---|---|---|---|
| | | Local Resource Utilisation/Efficiency | 3 | A reasonable number of resources (such as land, labour, inputs) necessarily needed for rice production are generated locally from the state. Currently over 249,371ha is under rice cultivation in Jigawa. The presence of Fadama land of about four hundred thousand hectares, and Hadejia valley irrigation scheme allow for production of lowland and upland rice for both wet and dry seasons. |
| | **Opportunity** | Security | 5 | Agricultural land and investment are highly secure in Jigawa State. |
| | | Market Opportunity | 4 | The rice value chain presents a significant opportunity for the state, given the increasing demand for milled rice in Nigeria. The national demand for milled paddy rice is approximately 117 million metric tons, while production is around 86.5 million metric tons. The state has the potential to expand hectarage devoted to rice production from approximately 250,000 ha to 500,000 ha. |
| | | Active Investor Interest | 4 | Small-Medium-Large scale rice producers, processors and marketers such as Dangote Rice Mills, Three Brother Rice Mill, Klystat Foods and Beverages, Danmodi Rice Mills Gerawa Rice out-grower scheme, FURSA Rice out-grower scheme, are actively participating in the rice value chain in the state. In addition, IFAD VCDP and Fadama III Additional Finance are also increasing the number of participants along the value chain in the state |
| **Feasibility** | **Capability** | Natural Endowments | 4 | Jigawa State is endowed with vast agricultural lands that are suitable for crop production. The region features several flood plains (Fadama) where irrigated farming is practiced due to easy access to ground and surface water throughout the state. These flood plains are supported by rivers such as Hadejia, Kafin Hausa, Iggi, Dagwalo, Kiyako, Bunga, Gari, Jakara, and Gulka. Jigawa State has an approximate surface water volume of 477 million cubic meters (mcm), which includes streams, rivers, and ponds. Its groundwater volume ranges from 30,000 to 40,000 cubic meters per square kilometre per year, with a water recharge of 3,676 mcm per year from rainfall. The state boasts 20 major surface irrigation schemes and 14 borehole-based irrigation schemes. Some of these irrigation schemes are in Fadama (wetland) |

| Ranking Criteria | | | Program Score | Rationale |
|---|---|---|---|---|
| | | | | areas, such as the Hadejia Valley Project, which encompasses a vast irrigable expanse of fertile Fadama land covering over 400,000 hectares (JARDA, 2024). |
| | | Skills/Labour | 3 | The people of Jigawa have many years of experience in rice production, processing and marketing, which has developed the skills of farmers, processors and marketers over the years. Provision of labour in rice production is sufficient with the influx of youths from neighbouring states providing labour along the value chain. |
| | | Access to Land/Infrastructure | 4 | Jigawa State has one of the most pragmatic open-access land policies in Nigeria. Land suitable for large-scale crop production is readily available, and investors seeking more than 100 hectares for agricultural purposes can obtain it in less than six months. However, challenges persist in terms of infrastructure, including irrigation facilities, warehouses, aggregation centres, and other facilities. |
| | **Readiness** | Ease of Removing Barriers | 4 | Most of the barriers affecting the rice value chain are relatively easy to address. The state has been encouraging cluster farming since 2015 to facilitate the deployment of farming machinery at the production level. The JARDA is also working to enhance adoption of GAP among farmers. |
| | | Support for Sub-Sector Incentives | 4 | The state is supporting farmers with quality input and has recently established an Agency for Agricultural Mechanization, which will operate under a public-private partnership (PPP) arrangement. This initiative will facilitate farmers' access to farm operation services. |
| | | Political Will | 3 | To boost agricultural productivity and improve citizens' livelihoods, the state government has implemented several agriculture-based projects. These include the establishment of 1,000 rice millionaires, cluster farming initiatives, and accelerated wheat production efforts |
| **Viability** | **Economic Soundness** | Profitability and ROI Potential | 4 | Highly profitable with significant return per Naira invested. |
| | | Cost Effectiveness | 4 | Moderately low capital investment is required for the sector |

| Ranking Criteria | | | Program Score | Rationale |
|---|---|---|---|---|
| | | Funding Availability and Accessibility | 4 | Adequate support from donors and private investors. |
| | | Financial Risk Profile | 5 | The major risks in rice production in Jigawa State include prevalent use of farm saved seeds, inadequate supply of farm machines and equipment especially tractor for land preparation and combine harvesters for post-harvest activities; high costs of labour, limited irrigation infrastructure- weak linkages among the value chain actors; poor market coordination and information system for rice paddy marketing; and poor electricity supply. |
| | | **Overall Ranking** | **4.063** | |

### 13.3.14 Groundwater-Based Micro-Irrigation Systems

| Ranking Criteria | | | Program Score | Rationale |
|---|---|---|---|---|
| **Attractiveness** | **Impact** | Food Security | 4 | Expands irrigation for 10,000 hectares, improving yields moderately. |
| | | Job Creation & Women Empowerment | 4 | Provides jobs in installation and operation, with moderate opportunities for women. |
| | | Local Resource Utilisation/Efficiency | 5 | High efficiency through renewable solar energy and groundwater resources. |
| | **Opportunity** | Security | 4 | Reduces conflicts over water use in targeted areas. |
| | | Market Opportunity | 4 | Growing demand for high-value irrigated crops. |

| Ranking Criteria | | | Program Score | Rationale |
|---|---|---|---|---|
| | | Active Investor Interest | 3 | Moderate interest from private investors due to high initial capital requirements. |
| **Feasibility** | **Capability** | Natural Endowments | 5 | Abundant groundwater resources in priority LGAs. |
| | | Skills/Labour | 3 | Limited local expertise, requiring training programs for solar system maintenance. |
| | | Access to Land/Infrastructure | 4 | Accessible land with basic infrastructure improvements required. |
| | **Readiness** | Ease of Removing Barriers | 4 | Alignment with renewable energy policies minimizes regulatory hurdles. |
| | | Support for Sub-Sector Incentives | 5 | Strongly supported under Nigeria's renewable energy and agricultural policies. |
| | | Political Will | 4 | Moderate government backing for renewable energy initiatives. |
| **Viability** | **Economic Soundness** | Profitability and ROI Potential | 4 | Moderate profitability with significant operational savings. |
| | | Cost Effectiveness | 4 | Good cost-to-benefit ratio leveraging solar technology. |
| | | Funding Availability and Accessibility | 4 | Adequate support from donors and private investors. |
| | | Financial Risk Profile | 3 | Moderate financial risks due to high upfront costs. |
| | | **Overall Ranking** | **4.000** | |

### 13.3.15 Wheat value chain development

| Ranking Criteria | | | Program Score | Rationale |
|---|---|---|---|---|
| **Attractiveness** | **Impact** | Food Security | 4 | Wheat is a strategic commodity after rice in achieving food and nutrition security with a vital role in supply of basic raw material to the flour milling industry whose main baking product is bread and various confectioneries, biscuits, noodles, semolina etc. The importance of wheat has been steadily increasing in recent decades owing to the growing population, changing food preferences and increasing urbanization has led to a growing demand and supply gap. |
| | | Job Creation & Women Empowerment | 4 | The wheat value chain has created a substantial number of direct and indirect jobs and still has the potential to create more if the necessary investments are put in place. For instance, women and youth are employed in a diverse range of wheat processing activities in Nigeria. |
| | | Local Resource Utilisation/Efficiency | 5 | Local resources are fully utilized in wheat production and marketing in Jigawa State. Efficiency in resource allocation has a far-reaching impact on the observed level of farm output. The existence of inefficiencies indicates that output can be increased without the use of additional conventional inputs or new technology. A large-scale investment would enhance and expand the use of the natural resources available in the state. |
| | **Opportunity** | Security | 5 | The peaceful nature the state offers the safe production of wheat and other agricultural commodities with no threats to farmers or companies investing in the wheat sub sector. |
| | | Market Opportunity | 5 | The national annual demand for wheat is 5.78 million metric tons. The gap between production and national requirements is 5 million metric tons per annum. This significant gap between demand and supply presents a considerable opportunity for potential investors, particularly in Jigawa State, where the state has comparative and competitive advantages in Nigeria. |

| Ranking Criteria | | | Program Score | Rationale |
|---|---|---|---|---|
| | | Active Investor Interest | 3 | Small, medium, and large-scale wheat producers and marketers are actively involved in the wheat value chain. Large-scale off-takers, such as Northern Nigeria Flour Mills, are currently operating an out-grower scheme in the state. |
| Feasibility | **Capability** | Natural Endowments | 3 | Access to vast Fadama land and a favourable climate for wheat production provide the necessary natural endowments needed to produce the commodity in the state. In addition, the presence of the Hadejia Valley Irrigation Scheme is an added advantage to the existing natural endowments. |
| | | Skills/Labour | 4 | There is an availability of both skilled and unskilled labour needed for wheat production. Farmers have gained the requisite experience in millet production due to years of cultivation. However, skilled labour at the industrial level is lacking due to low investment in the sector. |
| | | Access to Land/Infrastructure | 5 | Jigawa State is the first state in the country to fully adopt the principles of Responsible Agriculture Investment (RAI). The implementation has led to the development of Land Acquisition and Resettlement Framework which provides guidelines for the acquisition of land for large scale agriculture and ensures that rights of all land users are adequately protected thereby improving investor confidence. |
| | **Readiness** | Ease of Removing Barriers | 4 | Most of the barriers affecting the rice value chain are relatively easy to address. The state has been encouraging cluster farming since 2015 to facilitate the deployment of farm machinery at the production level. While JARDA is also working to enhance adoption of GAP among farmers. |
| | | Support for Sub-Sector Incentives | 4 | The state is supporting farmers with quality input and has recently established an Agency for Agricultural Mechanization, which will operate under a public-private partnership (PPP) arrangement. This initiative will facilitate farmers' access to farm operation services. |
| | | Political Will | 3 | The State government is committed to developing agricultural value chain where the State has comparative and competitive advantages. |

| Ranking Criteria | | | Program Score | Rationale |
|---|---|---|---|---|
| **Viability** | **Economic Soundness** | Profitability and ROI Potential | 3 | Highly profitable with significant return per Naira invested. |
| | | Cost Effectiveness | 3 | Moderately low capital investment is required for the sector |
| | | Funding Availability and Accessibility | 3 | Adequate support from donors and private investors. |
| | | Financial Risk Profile | 5 | Moderate financial risks due to high upfront costs. |
| | | **Overall Ranking** | **3.938** | |

### 13.3.16 Millet value chain development

| Ranking Criteria | | | Program Score | Rationale |
|---|---|---|---|---|
| **Attractiveness** | **Impact** | Food Security | 5 | Nigeria is the second-leading producer of millet in Africa and the fourth in the world. However, millet production has declined since 2011. Despite this decline, the crop plays a significant role in household food security. In 2023, Nigeria produced 2 million metric tons of millet, with Jigawa State contributing 593,440 metric tons. This underscores the importance of millet in ensuring food security for households in the state. |
| | | Job Creation & Women Empowerment | 2 | Both women and youth are employed along the millet value chain. More women are engaged at the production and processing levels, while youth tend to be more involved in marketing. |

| Ranking Criteria | | | Program Score | Rationale |
|---|---|---|---|---|
| | | Local Resource Utilisation/Efficiency | 5 | Millet is produced in all 27 Local Government Areas (LGAs) of Jigawa State. The major factors of production are sourced locally, and the climatic and soil conditions favour its production. |
| | **Opportunity** | Security | 5 | The peaceful nature the state offers the safe production of millet and other agricultural commodities with no threats to farmers or companies investing in the millet sub sector. |
| | | Market Opportunity | 3 | The global millet market is projected to grow at a rate of 3.5% between 2024 and 2029. With Nigeria being one of the leading producers, the country is expected to benefit economically from this rising global demand. The industrial uses of millet present investment opportunities for potential investors in the state. |
| | | Active Investor Interest | 1 | The presence of private companies purchasing millet in Jigawa State creates a ready market for millet. Companies such as FURSA Foods, Dala Foods, Dantata Foods, and Grain Cereals offer excellent market opportunities for millet farmers. |
| **Feasibility** | **Capability** | Natural Endowments | 3 | Access to land and a favourable climate for millet production provide the necessary natural endowments needed to produce the commodity in the state. |
| | | Skills/Labour | 4 | There is an availability of both skilled and unskilled labour needed for millet production. Farmers have gained the requisite experience in millet production due to years of cultivation |
| | | Access to Land/Infrastructure | 5 | Jigawa State is the first state in the country to fully adopt the principles of Responsible Agriculture Investment (RAI). The implementation has led to the development of Land Acquisition and Resettlement Framework which provides guidelines for the acquisition of land for large scale agriculture and ensures that rights of all land users are adequately protected thereby improving investor confidence. |

| Ranking Criteria | | | Program Score | Rationale |
|---|---|---|---|---|
| | **Readiness** | Ease of Removing Barriers | 4 | Most of the barriers affecting the millet value chain are relatively easy to address. The state has been encouraging cluster farming since 2015 to facilitate the deployment of farm machinery at the production level. While JARDA is also working to enhance adoption of GAP among farmers. |
| | | Support for Sub-Sector Incentives | 4 | The state is supporting farmers with quality input and has recently established an Agency for Agricultural Mechanization, which will operate under a public-private partnership (PPP) arrangement. This initiative will facilitate farmers' access to farm operation services. |
| | | Political Will | 3 | The State government is committed to developing agricultural value chain where it has comparative and competitive advantages. |
| **Viability** | **Economic Soundness** | Profitability and ROI Potential | 4 | Highly profitable with significant return per Naira invested. |
| | | Cost Effectiveness | 4 | Moderately low capital investment is required for the sector |
| | | Funding Availability and Accessibility | 4 | Adequate support from donors and private investors. |
| | | Financial Risk Profile | 5 | Moderate financial risks due to high upfront costs. |
| | | **Overall Ranking** | **3.813** | |

13.3.17 Beef value chain development

| Ranking Criteria | | | Program Score | Rationale |
|---|---|---|---|---|
| **Attractiveness** | **Impact** | Food Security | 4 | The livestock sub-sector is an important and integral component of Jigawa state's agriculture and is a major source of household wealth and food security. There has been an increasing demand for beef and milk, the main sources of domestic animal protein in Nigeria, and this has resulted in a domestic supply gap owing to poor production and productivity levels of the indigenous production systems. The current economic situation in Nigeria indicates that domestic supply of animal protein is growing at 1.8% per annum while the overall demand is estimated to be rising at 5.1% annually. |
| | | Job Creation & Women Empowerment | 5 | Women and youth are actively involved beef value chain in the State. Particularly at the production, processing and marketing stage of the value chain. More youth are into cattle fattening, artisanal meat processing and marketing activities. Livestock production is among the top-ranking employer of labour in the state and contribute significantly to the state internally generated revenue and AGDP. |
| | | Local Resource Utilisation/Efficiency | 3 | Jigawa State has abundant meadows land which are suitable for livestock production, and in most cases these lands are grossly underutilized. Crop residues from cereals and legumes, abundant grass land provides feeds utilized by cattle producers. The existence of Hadejia valleys irrigation scheme and over 400, 000 ha of Fadama land increases the availability of feeds during dry season. |
| | **Opportunity** | Security | 4 | Nigeria's livestock development potential, although large, is constrained by rapid depletion and poor management of natural resources and environmental pollution coupled with resource-use crisis between the crop farmers and the herders. Jigawa State is among the Northern State with absolute peace and security for agricultural land and investment. |
| | | Market Opportunity | 3 | Nigeria's animal protein consumption is significantly lower than the global average, leading to nutritional deficiencies. Increasing domestic production through improved livestock management practices is crucial to meet rising demand and reduce reliance on imports. This presents an investment opportunity to potential investors in the sector considering the gap between demand and supply of animal protein in |

| Ranking Criteria | | | Program Score | Rationale |
|---|---|---|---|---|
| | | | | Nigeria. There are well organized wholesale and retail markets in Maigatari, Gagarawa and Birniwa LGAs. Marketers from all over the country are patronizing these markets. Although there is no direct meat processing company buying cattle from the state, however majority of stakeholders believed that UAC Meat Processing Company located in Lagos is generating significant part of their animals from the state. |
| | | Active Investor Interest | 5 | Apart from Fulani transhuman, agro-pastoralists, local butchers, marketers, transporters there is no evidence of any well organize investment in the cattle industry in the state. |
| **Feasibility** | **Capability** | Natural Endowments | 5 | Jigawa State has about 3,816 square kilometres of Fadama land, equivalent to about 411,337 Hectares, one of the highest in the country. These wetlands are suitable for both livestock and crop production all year round. |
| | | Skills/Labour | 3 | Over the years the sedentary livestock keepers and Fulani transhuman have perfected their skills on management and marketing strategies for livestock in Nigeria. Jigawa state has well developed veterinary clinics spread across its geographical locations, with a reasonable number of veterinary doctors. |
| | | Access to Land/Infrastructure | 5 | Access to land for livestock production may not be a serious challenge in cattle production in Jigawa State. The State has abundant meadows which may not be suitable for crop farming. But low investments in meat processing facilities, storage facilities and feed industry had impacted negatively on the growth of beef value chain in the state. |
| | **Readiness** | Ease of Removing Barriers | 3 | There are limited constraints to beef value chain development besides, feeds scarcity during dry season. Population growth couple with continues conversion of grazing land to arable land will continue to fuel the menace of farmer-herders clashes in the country. Absence of enforcement agency that will revive and manage the existing grazing reserve has remain a key challenge that limit feed supply throughout the year. |

| Ranking Criteria | | | Program Score | Rationale |
|---|---|---|---|---|
| | | Support for Sub-Sector Incentives | 4 | Jigawa state had over 10 gazetted grazing reserves, and the State is willing to develop the reserve to befitting ranches. |
| | | Political Will | 4 | The government had indicated high political will to support the livestock value chain development in the state. The State had contacted investors from Saudi Arabia and Turkey for possible PPP arrangement in the sector. |
| **Viability** | **Economic Soundness** | Profitability and ROI Potential | 3 | Highly profitable with significant return per Naira invested. |
| | | Cost Effectiveness | 3 | Moderately low capital investment is required for the sector |
| | | Funding Availability and Accessibility | 3 | Adequate support from donors and private investors. |
| | | Financial Risk Profile | 4 | Moderate financial risks due to high upfront costs. |
| | | **Overall Ranking** | **3.813** | |