



Guangxi Biotech Investment Company Limited, a prominent member of the esteemed Guangxi Co-op Circular Economy Industry Group, plays a crucial role in disseminating cutting-edge technology globally. Through strategic partnerships within Mainland China and ASEAN, the company actively promotes innovative solutions in the biotechnology sector.

As a key player in the Group's international expansion strategy, Guangxi Biotech Investment Company Limited facilitates the export of groundbreaking technologies, serving as a conduit for impactful trade initiatives and collaborative ventures with global partners. The Company also lends its support to additional projects within the agriculture sector.

Guangxi Biotech Investment Company Limited advocates for environmentally conscious practices, aiming to spark positive change and nurture mutually beneficial relationships within Mainland China, ASEAN, and beyond. Through its strategic initiatives, the company strives to make a lasting impact on the global biotechnology landscape, fostering progress and innovation in sustainable development.



CHINA'S REVOLUTIONARY ECOLOGICAL CIRCULAR AGRICULTURE MODEL

The Model

THE INTEGRATED DATA-DRIVEN ECOLOGICAL PIG FARMING AGRICULTURAL MODEL LEVERAGES ON THE NATIONAL AGRICULTURAL INFORMATION ACCOUNT. IT EFFECTIVELY COLLECTS, INPUTS AND ANALYSES AGRICULTURAL DATA IN ORDER TO MONITOR AND GOVERN AGRICULTURAL ACTIVITIES WITHIN THE REGION, AND SUBSEQUENTLY IMPLEMENTS CORRESPONDING REGULATORY MEASURES.

<https://gxbi.com.hk>





As data management and control have become increasingly digitized, it enabled the accumulation of large datasets to be rapidly extracted and analysed by computers. This has led to the development of digital technologies such as **blockchain** and **artificial intelligence**, which are backed by the integration and iterative models. It **fully operates based on data** and is **governed and controlled according to data insights**.

Leveraging on the national agricultural information database system each stage of the process can be traced and grounded in reliable evidence. This ultimately achieves an **ecologically-sound, green and environmentally-sustainable cycle**.

It fully capitalizes on the Cooperatives' advantage in data in driving a transformation in the regulatory and management fundamentals for agriculture. This promotes the efficiency and effectiveness of the regulatory governance, and realizes the modernization of China's agricultural monitoring and control system.

By embedding the principle of "AI driven governance driven governance" throughout the Model – which encompasses certification of eco-centric livestock rearing, utilisation of livestock waste, centralised agricultural cultivation, and cross-industry synergy.

THE MODEL



CONTENT

01\

INTEGRATION OF 4 PILLARS

- 01.1 Certification of Eco-Centric Livestock Rearing
- 01.2 Utilization of waste
- 01.3 Intensive Agricultural Cultivation
- 01.4 Cross-Industry Synergy

02\

EFFICIENCY ANALYSIS

03\

AI GOVERNANCE

04\

COLLABORATIVE APPROACHES & ILLUSTRATIVE EXAMPLES

05\

OFFICIAL VISIT



01.1

INTEGRATION OF 4 PILLARS

CERTIFICATION OF ECO-CENTRIC
LIVESTOCK REARING

The General Office of the Guangxi Zhuang Autonomous Region People's Government has continuously carried out the certification of eco-centric livestock farming operations, and has **achieved phased results** in regulating the development of the livestock industry.

OFFICIAL PUBLICATIONS

The General Office of the Guangxi Zhuang Autonomous Region People's Government issued the "13th Five-Year Plan for Guangxi's Modern Eco-Centric Livestock Rearing", and have subsequently issued **other publications** including the "Technical Specifications for Guangxi's Modern Eco-Centric Livestock Rearing (Trial)", "Notice on Accelerating the Promotion of Modern Eco-Centric Livestock Rearing", and the "Certification Work Plan for Guangxi's Eco-Centric Livestock Rearing Farms".

They have continuously carried out the certification of eco-centric livestock farming operations, and have achieved phased results in regulating the development of the livestock industry.



GUANGDONG IS THE COUNTRY'S MAJOR PIG AND POULTRY PRODUCTION REGION, AND A CRUCIAL LIVESTOCK SUPPLIER FOR THE GUANGDONG-HONG KONG-MACAO GREATER BAY AREA.

The scale in the region is as follows:

8,200 MODELLED PIG farms in production

32 KEY NATIONAL PIG farming prefecture

33.47 MILLION PIGS sold annually

22.20 MILLION PIGS in inventory at the end of the year

2.63 MILLION TONS of pork produced

*Statistics according to the National Bureau of Statistics in 2022

KEY CRITERIA FOR CERTIFICATION :

(1) MICROBIAL FERMENTATION OF FEED

Feeding livestock with feed that has undergone microbial fermentation using crop residues like straw, sugarcane leaves, or mulberry leaves, or alternatively, incorporating specialized microbial additives mixed into the feed.

(2) STANDARDIZED FARMING FACILITIES

The livestock farms are strategically located and designed. The production facilities and equipment for housing animals, its feeding and its environment adhere to recognised standards for sustainable and environmentally responsible livestock production.

(3) SANITIZED FARMING ENVIRONMENT

Prioritize in maintaining a consistently clean, orderly, and sanitary environment for the animals and operations.

(4) NO ADDITIVES

No additives are used in the feed or drinking water. Any use of chemical disinfectants that leave residues or impact product quality and probiotic safety are prohibited.

(5) UTILIZATION OF LIVESTOCK WASTE

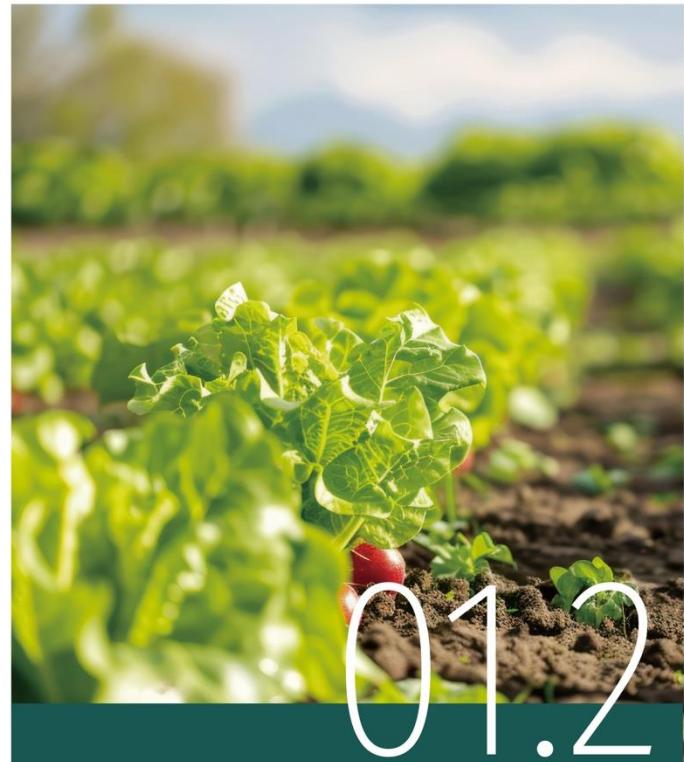
Facilitated with adequate manure storage with specialized microbial fermentation technology to process livestock waste. The fermented manure is then directly reused as fertilizer onto its farmland or further processed as organic fertilizer.



INTEGRATED BENEFITS

These certification standards consider core elements such as animal welfare and product safety. At the same time, they also **address holistic considerations across the livestock farm operations** - from reducing manure at its source, standardizing controls, to convenient end-processing, and maximising utilization on-site.

The Model not only meets these certification requirements, but also **delivers impressive integrated benefits ecologically and environmentally**, such as ensuring high product quality and safety, attaining elevated feed conversion ratios, boosting labour productivity, and optimizing land utilization.



INTEGRATION OF 4 PILLARS UTILIZATION OF LIVESTOCK WASTE



The rapid development of the livestock and poultry farming industry has led to **serious environmental pollution**, which is an urgent problem to be addressed in rural areas in China.

The key is to prevent the direct discharge of manure and biogas, and to establish channels for direct utilisation of manure to the fields as fertilizer.

Due to its distinctive karst landform features, improper treatment of manure and waste from the livestock and poultry farming has severely polluted the quality of groundwater in Guangxi.

Feedback from relevant monitoring agencies indicate that the water quality in some livestock farming clusters in Guangxi was considered as Grade V, and further deteriorates to fall under Grade V during dry periods.

Grade I

Water source originating from the national nature reserves, not exposed to any external pollution

Grade II

Drinking water from national Class I protected areas

Grade III

Drinking water for animals and plants from national Class II protected areas

Grade IV

Water used for general industrial purposes and water recreational activities

Grade V

Water for agricultural use and ornamental purposes

Lower-Grade V

Poor water quality
Cannot be served as drinking water

In the past, small and medium-sized farms relied on the approaches of 'banning' and 'complete demolition' in addressing the issue of direct waste pollution, which did not solve the fundamental problem and may lead to income fluctuations of the farmers.

Such a blanket approach for governance is ineffective, the key is **to prevent the direct discharge of manure and biogas, and to establish channels for direct utilisation of manure** to the fields as fertilizer.



By negotiating and signing disposal agreements with the farms, the disposal and utilization process of livestock and poultry manure enters the Model.



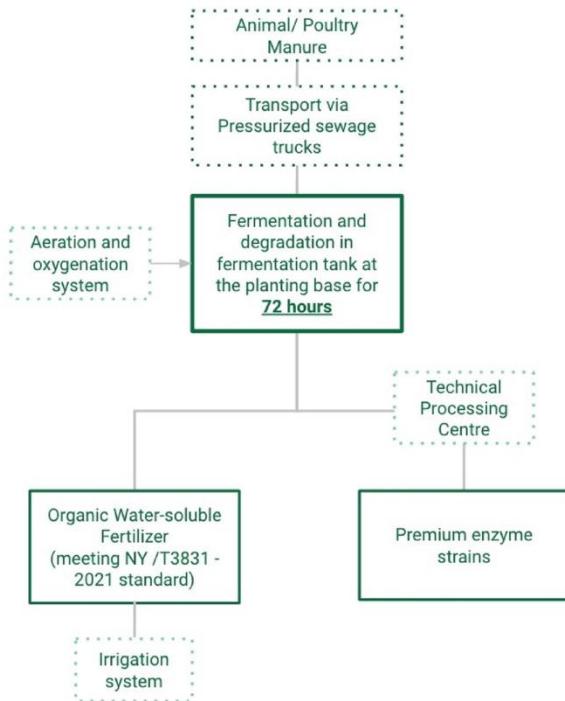
93.9% utilization rate of livestock and poultry manure in the entire region

99% matching rate of manure treatment facilities in large-scale livestock and poultry farms

By using elevated mesh beds for pig farming, pigs can be promptly separated from manure, which eliminates the need for water flushing in the pens while reducing emissions at its source.

Additionally, by implementing separate rainwater and sewage systems, off-site fermentation beds, and comprehensive resource utilization facilities, the objective of ecological pig farming can be achieved.

HYDROLYZING ANIMAL/ POULTRY MANURE WITHIN 72 HOURS



Technology-led agricultural integration strives to foster new development for the entire industry.

Guangxi Co-op Circular Economy Industry Group is a pioneer in an innovative model for the utilization of commercial livestock waste. Their contribution outlined a new blueprint for agricultural circular economy in the country and is representative of a new chapter in supply and marketing services for the "Three Rural" areas.

UTILIZATION OF WASTE

7 WAYS TO MAXIMIZE UTILIZATION

Resource utilization:

100% utilization of livestock manure with organic water-soluble fertilizer being odorless and residue-free.

Utilizing livestock manure as raw material for recycling and forming organic water-soluble fertilizer, meeting the fertilizer supply for the three major strategic commodities: grain, oil, and sugar.

Rapid processing:

Speeds up the **fermentation of livestock manure into fertilizer** to **within 72 hours** instead of being more than 30 days traditionally.

Sustainable Development:

Positioning to be market-oriented, with focus on products and technologies introduced by the government and enterprises, **forming a closed-loop circular industry chain** of "cultivation, breeding, management, collection, storage, sales, and services."

Value-added:

Turning waste into resources, increasing production and quality, improving efficiency and income, and enhancing soil fertility and ecological improvement.

Harmlessness:

Avoiding adverse impacts on the environment, crops, and human health during the collection, transportation, storage, and disposal of livestock manure.

AI Governance:

By utilizing data from the *National Agricultural Information Account*, the transformation from digitalization to digital governance aims to **visually express and digitally analyze the impact of agricultural cultivation and breeding**, as well as its environmental impacts. This addresses the problem of insufficient personnel in government regulatory departments.

Zero emissions:

No emissions of gas or residue in the entire process.

01.3



INTEGRATION OF 4 PILLARS

INTENSIVE AGRICULTURAL CULTIVATION

INTENSIVE CULTIVATION PROCESS

Intensive cultivation is a process led by county and district governments and Cooperatives, together with the new operational entity of Guangxi Co-op Circular Economy Industry Group (project company), in organising land transfer.

Operated on the premise of utilization of livestock manure resources, the Model **unifies agricultural planning through data** from the *Ledger System of the National Significant Agricultural Resource Information* that includes plowing, planting, management, harvesting, storage, sales, and services.

By fully leveraging the strengths and functions of different service entities, the goal is **to meet the national strategic production requirements for grain, oil, and sugar.**

The process also aims to **continuously improve the scale of agricultural cultivation**, ultimately achieving the effects of soil organic carbon cycling, balanced nutrient, and sustainable intensive cultivation. At the same time, promoting the quality and efficiency of agriculture.

Based on the *Ledger System of the National Significant Agricultural Resource Information*, **national and industrial standards are set up for different crops.**

Each stage of agricultural production is certified by the *Judicial Agricultural Certification Library* and closely collaborates with the *Department of Agriculture* to build a standard database.

The *Financial Office* and banks then use the database to quickly determine crop growth and allocate fast and accurate loans, solving the funding needs of intensive planting, and support sustainable intensive planting.



KEY MARKERS IN THE CONSTRUCTION OF INTENSIVE AGRICULTURAL DATA ASSET ASSESSMENT CENTRE

STEP 1

SYNCHRONOUS CONSTRUCTION OF
NATIONAL AND INTERNATIONAL STANDARDS

STEP 2

ESTABLISHMENT OF THE JUDICIAL
AGRICULTURAL CERTIFICATION LIBRARY

STEP 3

COLLABORATION WITH THE AGRICULTURAL
DEPARTMENT TO BUILD A STANDARD DATABASE

STEP 4

COLLABORATION WITH THE FINANCIAL
OFFICE AND BANKS TO CERTIFY DATA ASSETS



01.4

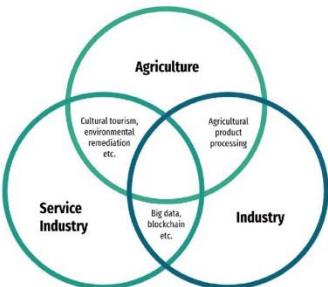
INTEGRATION OF 4 PILLARS CROSS-INDUSTRY SYNERGY

Through tightly connecting and synergizing agriculture, industry and service sectors, the Model **integrates capital, technology and resources** in an efficient manner and ultimately forms new technologies, businesses and business models.

The integration encompasses agricultural production, agricultural product processing and sales, catering, leisure, cultural tourism, environmental remediation and other service industries.

This achieves the extension of the agricultural industry chain, expands the scope of industries, accelerates the overall upgrading of agricultural industrialization and modernization, As well as increased production, efficiency, and income for the government, enterprises, and residents.

With on agriculture as the foundation, cultural, leisure, and tourism sectors are integrated, forming a **cross-sector integration model**. For example, the integration of agriculture with culture and tourism can create leisure and sightseeing agriculture, promoting efficient, green, and ecological modern agricultural development. This approach keeps profits in rural areas, effectively increasing farmers' income and promoting rural development.



INTEGRATION OF AGRICULTURE AND INDUSTRY

The Model utilizes the innovative technology of livestock and poultry manure resource utilization to increase production and improve quality. With the support of technology, it extends the agricultural product industry chain and effectively ensures the strategic supply of national grain, oil, and sugar.

Farmers not only benefit from increased value and income but also gain employment opportunities from the various processes of intensive cultivation. This further **accelerates the structure of the agricultural product processing industry** and **promotes the transformation from primary processing**.

INTEGRATION OF AGRICULTURE AND SERVICE INDUSTRY

With the continuous improvement of the modern agricultural industry system and the subdivision of related fields, the development and expansion of modern agriculture inevitably require the support of relevant service industries.

Companies affiliated with the autonomous region's supply and marketing system sign service agreements with large-scale plantations and implement the Model. They establish localized cultivation techniques and provide comprehensive service guidance for various aspects of agricultural production, including cultivation, planting, management, harvesting, storage, sales, and services, to **ensure the smooth flow of agricultural production and marketing**.

An example of this integration is the establishment of oil-tea plantations as cultural and tourism destinations.



INTEGRATION OF AGRICULTURE, INDUSTRY, AND SERVICE

The Model integrates advanced technologies such as remote sensing, geographic information systems, positioning systems, computer technology, communication and networking technology, and automation technology. It realizes **real-time monitoring of crops, soil, and other elements** in the agricultural production process from macro to micro levels.

Based on the *Ledger System of the National Significant Agricultural Resource Information*, an agricultural data asset evaluation center is established, upgrading the agricultural financing model. This not only **ensures accurate disbursement of national agricultural subsidies and loans** but also **invites financial and insurance resources** into the agricultural and rural sectors.

The creation of digital national-level ecological farms, and the acceleration of agricultural modernization and rural-urban development integration, ultimately realizing **rural revitalization**.

02. ANALYSIS EFFICIENCY



INCOME INCREASE

Improving agricultural competitiveness

By developing modern agriculture with the core focus on scale, resource utilization, intensification, and industrialization, integrating crop and livestock farming, production and supply, domestic and international trade. The innovative utilization of livestock waste resources has achieved the effect of increasing production quality, reducing costs, and increasing income within the project area.



SUSTAINABILITY

Accelerating the development of green agriculture

By integrating the principles of circular economy into the production, processing, sales, services, and management of agricultural products, promoting sustainable agricultural development and enhancing agricultural competitiveness.



MODERNIZATION

Promoting the development of modern agriculture

The project company coordinates grain procurement and provides technical guidance through integrated planning. The utilization of cultivated land at scale and mechanized operations enhances the comprehensive production capacity of agriculture.



Actively cultivating new types of agricultural entities, increasing the efforts in creating model family farms and professional cooperation among farmers, accelerating the cultivation of socialized agricultural service organizations, and fully leveraging various production and business entities to connect farmers with the market.

This promotes the development of modern agriculture and creates favorable conditions for the promotion and application of advanced technologies, new facilities, and modern management methods.

ECONOMIC BENEFITS

SOCIAL BENEFITS

IMPROVE NATIONAL FOOD SAFETY

Improve efficiency of cultivated land utilization, enhancing grain production capacity, disaster prevention, and mitigation capabilities, demonstrating the effects of storing grain in the land and grain storage technologies.

PROMOTING HIGH-QUALITY AGRICULTURAL DEVELOPMENT AND GREEN TRANSFORMATION

Through multi-party coordination, contiguous implementation and exploration models to promote and accelerate the construction of a sustainable development mode that combines crop and livestock farming with ecological cycles.

Ultimately, promoting the transformation and upgrading of agricultural management methods, production methods, and resource utilization methods to accelerate the development, green agriculture, and facilitating the comprehensive urban-rural revitalization.

Simultaneously, cultivating a group of ecological agricultural entities, fostering a new generation of farmers engaged in ecological and environmental agriculture, implementing ecological circular agricultural technologies, and developing ecological circular economy industries, which will drive the improvement of regional income levels, mobilize farmers, and promote rural modernization.

ECOLOGICAL BENEFITS

SOIL REMEDIATION AND IMPROVING SOIL FERTILITY

Referring to the *National Standards for Land Types and Land Fertility Grades*, the organic matter, total nitrogen, available phosphorus, available potassium, and pH value of the soil are improved by one fertility grade compared to the baseline before implementation.

IMPROVING THE AGRICULTURAL ECOLOGICAL ENVIRONMENT

Adopting the livestock and poultry manure treatment model, which has the characteristics of fast maturation, increased fertilizer quality, and rapid absorption by plants, gradually establishing a green and low-cost system and cycle of - feeding livestock based on land, using livestock manure to fertilize the land, connecting with afforestation, and on-site disposal.

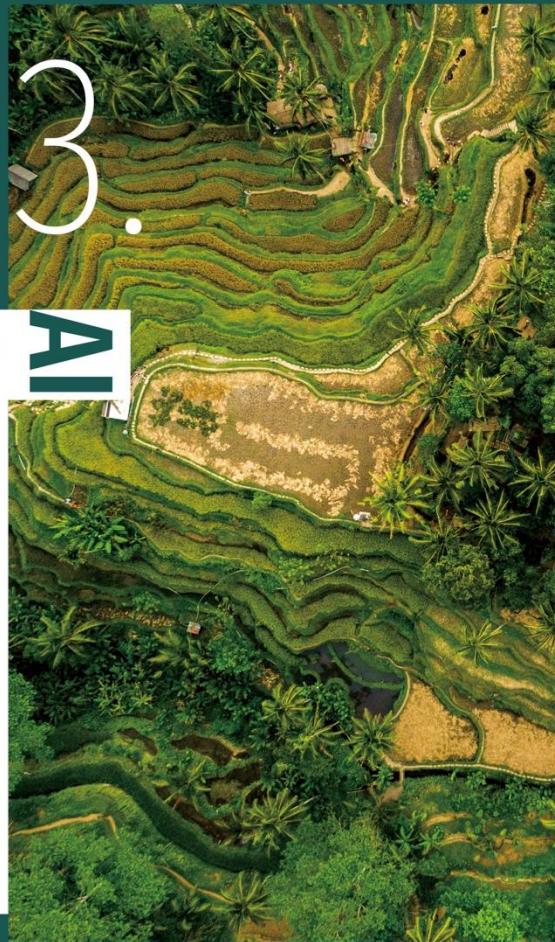
Effectively promoting the improvement of the agricultural ecological environment, resonating with national development strategies, and aligning with the development of ecological and environmental economy to achieve "carbon peak" and "carbon neutrality".

ENHANCING THE ECOLOGICAL FUNCTIONS OF FARMLAND

Enhancing farmland's water and soil conservation capabilities, improving the microclimate, preventing wind erosion, increasing forest biomass, optimizing the rural landscape, and providing a green barrier for ecological liveability in rural areas.

03.

GOVERNANCE



BACKED BY DATA

The Model leverages data provided by the *National Agricultural Information Account*.

As data management and control have become increasingly digitized, it enabled the accumulation of large datasets to be rapidly extracted and analysed by computers. This has led to the development of digital technologies such as blockchain and artificial intelligence, which are backed by the integration and iterative models.

The system effectively **collects, inputs and analyses agricultural data** in order to **monitor and govern agricultural activities within the region**, and subsequently **implements corresponding regulatory measures**.

This promotes the efficiency and effectiveness of the regulatory governance and realises the modernization of China's agricultural monitoring and control system.



REAL-TIME MONITORING

The Model integrates advanced technologies such as remote sensing, geographic information systems, positioning systems, computer technology, communication and networking technology, and automation technology with the disciplines of geography, agronomy, ecology, plant physiology, and soil science.

It realises **real-time monitoring of crops, soil, and other elements** in the agricultural production process from macro to micro levels. Real-time information is obtained on crop growth, development status, pests and diseases, water and fertilizer conditions, and related environmental factors.

This dynamic spatial information system **enables simulation of agricultural phenomena and processes**, aiming to achieve rational utilization of agricultural resources, cost reduction, improvement of ecological environment, and increased crop yield and quality.

ACCURATE DISBURSEMENT OF SUBSIDIES AND LOANS

The establishment of an agricultural data evaluation centre upgrades the agricultural financing model. Based on data provided by the *Ledger System of the National Significant Agricultural Resource Information*, national and industrial standards are set up for different crops. Each stage of agricultural production is then certified by the Judicial Agricultural Certification Library, and a standard database built with the Department of Agriculture. The Financial Office and banks can then utilise the database to quickly determine crop growth and allocate loans timely and accurately.

This not only **ensures accurate disbursement of national agricultural subsidies and loans**, but also **invites increased financial and insurance resources** into the agricultural and rural sectors.



COLLABORATIVE APPROACHES & ILLUSTRATIVE EXAMPLES

COLLABORATIVE APPROACHES

The Model guided by digital governance adopts cooperation modes such as "**Company + Farmers**" and "**Government + Leading Enterprises + Cooperatives + Farmers**".

At the **authority level**, it connects with local governments and enterprises to promote land management and large-scale contract management of livestock and poultry farms and the treatment of animal waste pollution.

At the **cooperative level**, the project company utilizes technologies for the resource utilization of livestock waste and the national agricultural resource information ledger system to support the management of large-scale farming and intensive cultivation, improving land productivity and efficiency to create a national-level ecological farm.

At the **lower management level**, connects with strategic resources such as grain, oil, and sugar to store, sell, and provide services.

At the authority level:

Transforming arable land for mechanized large-scale farming
Disposing of livestock manure pollution at regional farms

At the cooperative level:

Establishing project companies to leverage the advantages of government, enterprises, and cooperatives
Absolute controlling stake by the regional supply and marketing system's enterprises

At the lower management level:

Undertaking strategic resource storage, sales, and services
Establishing a closed-loop ecological circular economy by integrating the agricultural supply and marketing system and comprehensive environmental management

The cooperation mode of the Model is a response to the call in the 2023 Central Document to ensure stable food production and supply of important agricultural products, strengthen agricultural infrastructure construction, enhance agricultural technology and equipment support, promote high-quality rural industry development, broaden channels for increasing farmers' income, and promote liveable and prosperous rural development.

It is a cooperative mode that combines the positioning of the **regional strategic resources** and focuses on the **key areas of grain, oil, and sugar** to explore an ecological circular agriculture model with the characteristics of the supply and marketing cooperatives.

Currently, effective and sustainable cooperative relationships have been established with local governments, leading enterprises, and farmers in areas such as Nanning Wuma District and Qingxiu District. A **record of replicable cooperative experiences** and successful cases have been formed, and **demonstration bases** have been established.

Starting from **Nanning**, a sound and sustainable cooperative model will be gradually established, cultivating new agricultural operators. The Model will be gradually promoted and covered throughout the entire autonomous region and then extended to the whole country.

By leveraging the new agricultural technologies, new business models, and new formats cultivated in this model, it will promote the efficiency of agricultural operations, accelerate core technological progress in agriculture, and drive green agricultural development.

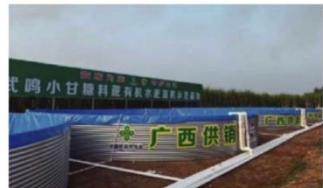


ILLUSTRATIVE EXAMPLES

WUMING XIAOGAN DEMONSTRATION BASE FOR SUGARCANE CULTIVATION AND LIVESTOCK FARMING

The Wuming Xiaogan Organic Water-Fertilizer Integration Demonstration Base for Sugarcane Cultivation and Livestock Farming is located in Ganwei Town, Wuma District, Nanning City. It is a high-yield and high-quality sugarcane demonstration base of Guangxi Rural Investment Group. The sugarcane planting area in the region is approximately 1,100 acres, with four large-scale pig farms in the vicinity producing around 14,000 hogs annually and generating about 16,000 tons of manure.

Within three years of project implementation, the sugarcane yield in the demonstration base increased by over 20% compared to the controlled area. The sucrose content of sugarcane in the treated area increased by over 1.5%, reaching a yield of over 8 tons per acre. The sucrose content reached 17%, achieving the goal of producing 1 ton of sugar per acre.



WUMING QIFENG MANDARIN ORANGE PLANTING AND LIVESTOCK FARMING CIRCULAR PROJECT

The Wuming Qifeng Juzhoubang Mandarin Orange Planting and Livestock Farming Demonstration Base is located in Pingdeng Village, Chengxiang Town, Wuming District, Nanning City, with a mandarin orange planting area of approximately 3,000 acres.

The base utilizes the organic water-soluble microbial fertilizer produced from the waste of nearby large-scale pig farms. Throughout the growth period of mandarin oranges, the fermentation water-soluble microbial fertilizer derived from livestock and poultry waste is used, realizing agricultural green ecological benefits and economic development.

It has become the core area of the "Wuma Mandarin Orange" industrial base in the Nanning National Science and Technology Park, earning the title of a four-star modern agricultural demonstration zone in the autonomous region in 2021.

It produces over 9,000 tons of high-quality fresh fruits annually, with a value exceeding 40 million RMB.

The mandarin orange yield in the demonstration base increased by over 10% compared to the controlled area, with an average fruit diameter of over 65mm and average sugar content exceeding 14 degrees.



NANNING QINGXIU DISTRICT YAOSHANG VILLAGE UTILIZATION OF AGRICULTURAL AND FORESTRY WASTE DEMONSTRATION PROJECT

The Nanning Qingxiu District Yaoshang Village Ecological Circulation Utilization of Agricultural and Forestry Waste Industry Demonstration Project is located in Yaoshang Village, Qingxiu District, Nanning City.

The project utilizes the most advanced synthetic biology and cell factory technology system in China, combined with the national agricultural information Account. It processes approximately 25-30 tons of organic waste from Nanning City and around 60 tons of slaughterhouse wastewater per day.

While promoting rural revitalization and improving the rural living environment, the project, once fully completed, will cover an area of up to 5,000 acres and have a total output value exceeding 70 million RMB.



05. OFFICIAL VISIT



ON-SITE MEETING OF THE AGRICULTURAL AND RURAL AFFAIRS DEPARTMENT OF THE AUTONOMOUS REGION AND THE MINISTRY OF AGRICULTURE AND RURAL AFFAIRS

The Company's multiple projects have been recognized at the national and regional levels.

Among them, the project base for the utilization of livestock manure resources in Wuming District, Nanning City, and the Qifeng Juzhoubang Mandarin Orange Planting Demonstration Base in Wuming District have been selected as **observation points for on-site meetings** organized by the *Ministry of Agriculture and Rural Affairs* and the *Agricultural and Rural Department of the Autonomous Region*. The participants unanimously recognized the significant achievements of the Company in innovative livestock manure resource utilization project construction, highlighting its exemplary demonstration effect.

On November 1, 2022, the *Agricultural and Rural Department of the Autonomous Region* organized the training on high-quality development of the livestock feed industry and the application of reduced soybean meal substitution technologies in Nanning City. The participants on-site observed and learned from the demonstration bases of the Wuming Xiaogan Organic Water-Fertilizer Demonstration Project for Sugarcane Cultivation and Livestock Farming and the Qifeng Mandarin Orange Planting and Livestock Farming Circular Project, which utilize livestock manure resources.



On November 10, 2022, the *Ministry of Agriculture and Rural Affairs* organized an on-site meeting on the utilization of livestock and poultry farming waste resources in Nanning City. Leaders and representatives from the *Ministry of Agriculture and Rural Affairs*, as well as agricultural and rural departments of various provinces, cities, and municipalities directly under the central government, attended the meeting to observe and learn from the demonstration bases of the Wuming Xiaogan Organic Water-Fertilizer Demonstration Project for Sugarcane Cultivation and Livestock Farming and the Qifeng Mandarin Orange Planting and Livestock Farming Circular Project, which focus on the utilization of high-quality livestock manure resources.

