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SHANDONG GUANGMING BIOTECHNOLOGY CO., LTD.



Dedicated to becoming a global technology leader in broiler breeding,
we drive industry advancement through exceptional quality and continuous innovation,
providing optimal breeding stock to clients worldwide.

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◎ Corporate Culture

Innovation · Excellence · Sustainability · Responsibility

◎ Corporate Vision

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01 | COMPANY PART 01 | PROFILE

Shandong Guangming Biotechnology Co., Ltd.

Shandong Guangming Biotechnology Co., Ltd. focuses on the cultivation and promotion and application of broiler breeds, and is committed to becoming a technological leader in the global broiler breeding industry, driving industry progress through exceptional quality and continuous innovation, and providing premium breeding stock to customers worldwide.

The company possesses a national core broiler breeding farm and a national-level avian leukosis purification farm. The Guangming No.2 broiler breeder independently developed and cultivated by the company has passed the national examination and approval, and has won the first prize of Beijing Science and Technology Progress Award, the first prize of Guangdong Province Science and Technology Progress Award, etc. It is a pioneering company in the field of solving major challenges in national broiler breeding.

4600⁺

Cover an area of 4,600 mu

100,000⁺

100,000 pure-line breeding stock

300,000_{GP}⁺

300,000 sets of grandparent stock

8,000,000_{PS}⁺

Capacity of providing 8 million parent stock each year

The company is in Jinan City, Shandong Province. It has respectively established breeding and propagation farms covering an area of 3,600 mu in Mile, Yunnan Province and 1,000 mu in Foshan, Guangdong Province. There are 100,000 Guangming No.2 pure-line breeding stock and 300,000 sets of grandparent stock. It has the capacity of providing 8 million sets of parent stock of Guangming No.2 broiler every year.

The company has established a long-term and in-depth strategic cooperation with Institute of Animal Sciences, Chinese Academy of Agricultural Sciences and the Poultry Institute of Shandong Academy of Agricultural Sciences, and has a national breeding research and development team.

The development of new technologies and breeding of new varieties by the company holds significant strategic importance for advancing technological innovation in China's seed industry, accelerating the domestic substitution of broiler, safeguarding national food security and seed industry safety, as well as promoting the Belt and Road Initiative.





02 | TECHNOLOGICAL PART 02 | INNOVATION

Based on the in-depth cooperation over the past decade, Guangming Biotech, and the Institute of Animal Science, Chinese Academy of Agricultural Sciences, continue to carry out in-depth joint research and development of breed cultivation. By establishing the "Innovation Center for Broiler Breeding", a breeding innovation team has been formed to research and develop intelligent phenotypic measurement technology, genomic selection technology, and big data analysis and application technology for broiler. The joint team keeps up with the international frontier, increases the application of new technologies, and continues to strengthen the improvement and selective breeding of the Guangming Broiler breeder series. It is committed to building Guangming Broiler into the "China Core" for revitalizing the national seed industry.



Institute of Animal Sciences, Chinese Academy of Agricultural Sciences

Founded in 1957, it is based on solving the overall, critical, directional and basic major scientific and technological problems of national animal husbandry, and has six major disciplines, including animal genetic resources and breeding. As of March 2024, the institute has 232 staff members, including 2 academicians of the Chinese Academy of Engineering and 34 candidates for national talent projects. There are four doctoral authorization points in animal husbandry, veterinary medicine, grass science and synthetic biology, among which the animal husbandry discipline is evaluated as A+ (fourth round). Since its establishment, it has won 29 National Technological Invention Awards and National Science and Technology Progress Awards. It has 5 national scientific research platforms and 12 provincial and ministerial scientific research platforms, including the State Key Laboratory of Animal Nutrition and the National Livestock and Poultry Germplasm Resource Bank.

The discipline of broiler genetics and breeding is a traditional dominant discipline of Institute of Animal Sciences, Chinese Academy of Agricultural Sciences. There are 5 researchers, 1 associate researcher, 2 assistant researchers, 2 scientific research assistants and more than 40 graduate students in the broiler genetics and breeding team. In 2018, the team was selected as the innovation team in the key areas of the talent promotion plan of the Ministry of Science and Technology, and cultivated the Guangming No.2 broiler breeder, a new breed of fast large-scale broiler, and the Jingxing Yellow Chicken 100, 102 and 103 breeders, new breeds of high-quality yellow feather broiler; The first broiler genome breeding chip in China was developed, and more than 10 breeding technology patents such as "a chicken whole genome SNP chip and its application" (ZL201780023421. X) were authorized. In 2016, the achievement of "Cultivation and Application of New Breeds of Grain-Saving, High-quality and Disease-Resistant Yellow-Feather Broilers" won the second prize of the National Science and Technology Progress Award. In 2022, the achievement of "Guangming No.2 Broiler New Provenance Creation and Genome Breeding Technology System Construction" won the Beijing Science and Technology Progress Award. First Prize for Progress.

Certificates and Honors



Patent Certificates and Software Copyrights



Paper Publication





1. Accurate Phenotype Determination Technology



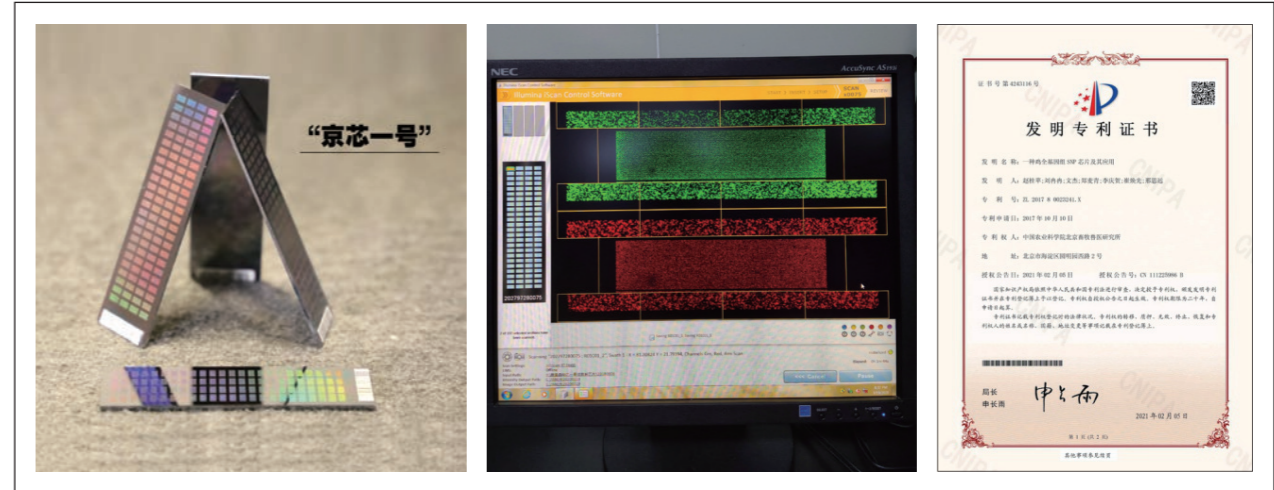
Accurate Measurement and Evaluation of Feed Intake

- Improve the measurement accuracy
- Improve the accuracy of feed compensation selection

Ultrasonic Biopsy Measurement of Pectoral Muscles

- B-ultrasound in vitro assay, reduce slaughtering
- Improve the accuracy of seed selection

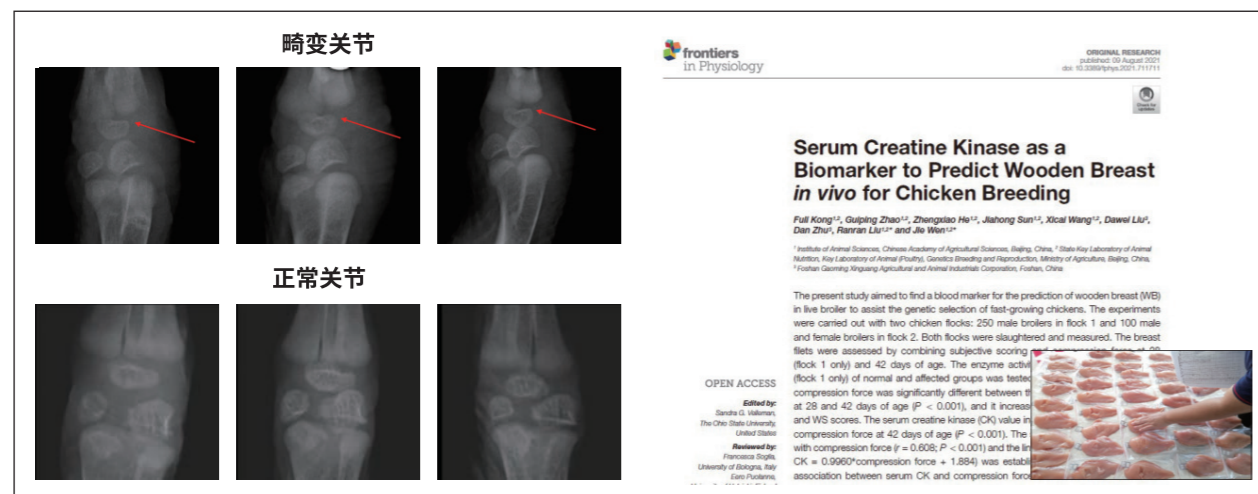
3. "Jingxin No.1" Genome Selection Technology



"Jingxin No.1" Chicken 55K Genome Breeding Chip V3 Version

- A strong correlation in biological functions, and the proportion of trait-related loci reaching 30%.
- Strong marker detection stability and short detection period

2. Meat Quality and Disease Resistance Trait Selection Technology



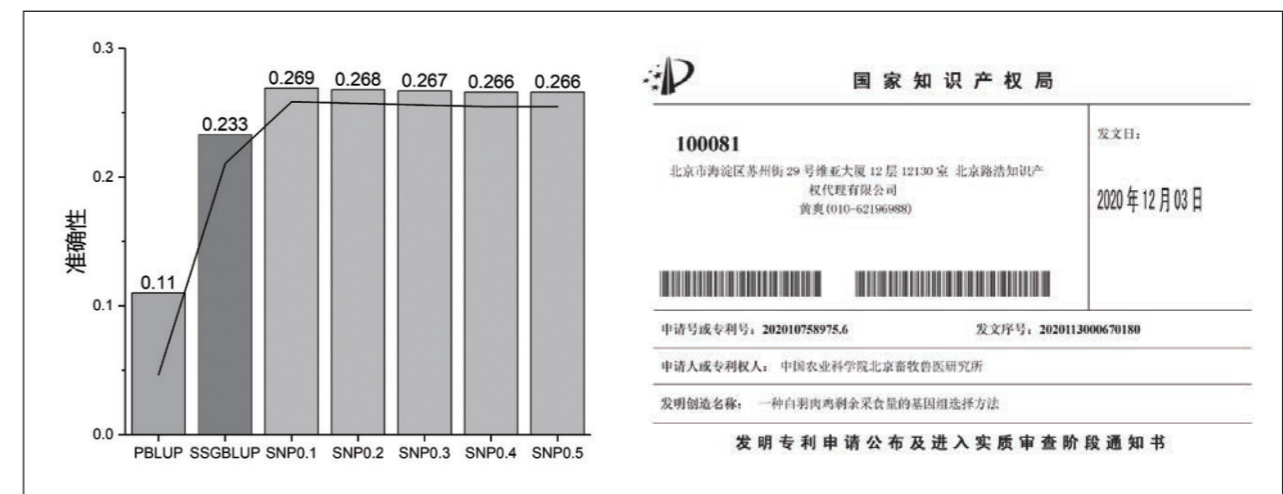
Tibial Development Assessment Technique

- X-ray measurement and gait scoring combined
- Improve the detection rate of tibial development problems

Assessment Technique of Woody Flesh of Pectoral Muscle

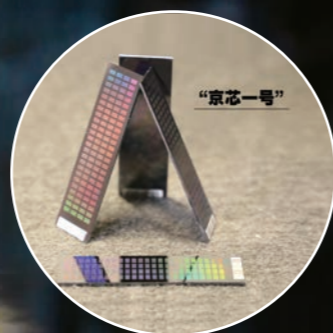
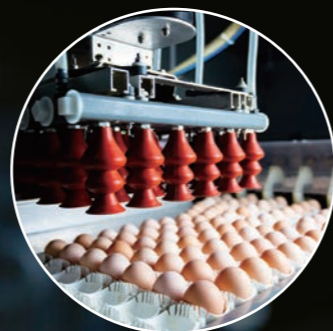
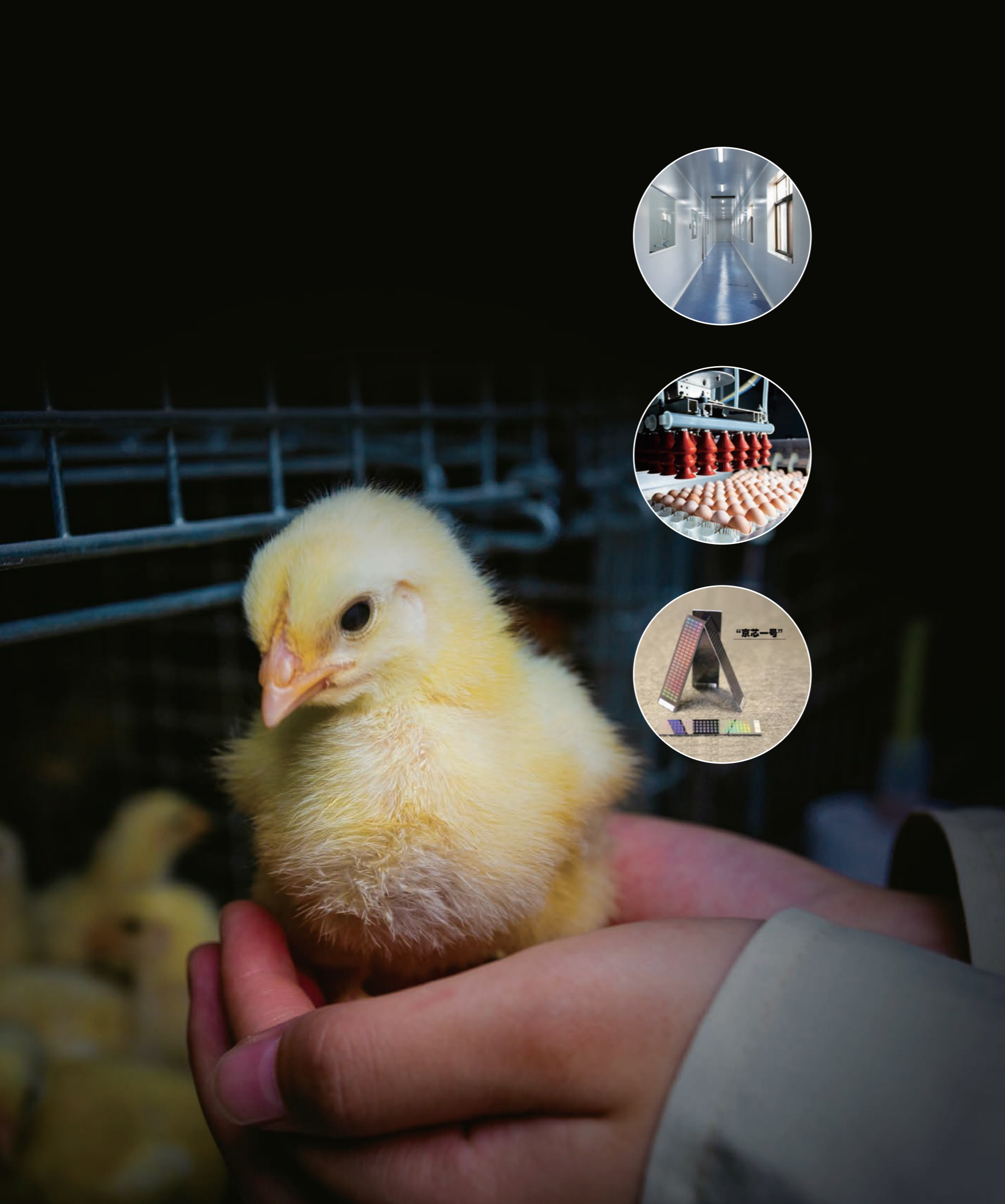
- Combination of tactile evaluation and serological detection technology
- In vitro assay, reduce slaughtering

4. Innovation of Genome Breeding Value Evaluation Methods



A New Method for Genome-wide Breeding Value Estimation by Integrating Prior SNP Marker Effects

- More than double the accuracy compared to traditional BLUP
- Significantly improved accuracy compared to one-step BLUP



Choosing Guangming Breeder, Confidence Comes From

- 01 30 years of "professional and dedicated" breeding research, technological innovation and accumulation are the guarantee of provenance safety and quality.
- 02 Institute of Animal Sciences, Chinese Academy of Agricultural Sciences, Shandong Academy of Agricultural Sciences, South China Agricultural University, National Broiler Industry Technology System, etc. provide us with strong technical support in the application of breeding technology, poultry nutrition, disease purification, feeding management and other aspects.

Breeding Techniques

- 01 Compared with top international groups, there is no generation difference in Guangming broiler breeding technology.
- 02 Accurate phenotype measurement technology realizes accurate measurement of feed conversion, egg production, meat yield and programmed data analysis.
- 03 The broiler SNP chip of "Jingxin No.1" independently designed and developed was adopted, and the whole genome selection technology was applied to achieve rapid breeding in terms of feed reward, meat yield and reproductive performance.
- 04 4 Use IAS broiler breeding data management cloud platform to realize standardized pedigree filing, genetic evaluation and breeder production management.

Purification Technology of Provenance Blight

- 01 Build a national first-class biosafety system: the site has a superior geographical location, natural epidemic prevention barrier, scientific construction layout, advanced equipment and facilities, and complete biosafety management system.
- 02 The water source is clean and unpolluted, and the drinking water for the chickens entering the house is sterilized and purified by ultraviolet rays.
- 03 The feed of the population is treated at high temperature and granulated to prevent contamination such as Salmonella.
- 04 Before hatching, the breeding eggs were pretreated at high temperature to strengthen the purification of MG and MS egg-borne diseases.
- 05 It is equipped with a high-standard veterinary laboratory, which can carry out experimental projects such as cell culture, virus isolation, bacterial isolation and culture, routine antibody monitoring, etc., and strictly purify the population from diseases.

Feeding Management Technology

- 01 Positive pressure ventilation filtration system and back-end dust removal system are applied to ensure clean air.
- 02 The chicken house environmental control system is controlled by "Internet of Things" technology to ensure that chickens grow in the most suitable environment.
- 03 Physical rodent-proof, bird-exclusion, and insect-barrier installations shall be implemented across the facility to block disease vector incursions.
- 04 Automatic manure conveyance, automatic truck loading, and anaerobic digestion in fermentation tanks to achieve non-hazardous waste treatment and environmental protection.

03 | R&D JOURNEY

PART 03

2014

Partnering with the national-level breeding R&D team—the chief scientist team from the Institute of Animal Science of CAAS, opening a New Chapter in Industry-Research Collaboration.

2017

Industry-Academia Collaboration Yields China's First Broiler Breeding Chip & Advanced Genomic System.

2019

MARA launched a national livestock and poultry breeding joint research initiative, with Guangming leading one of the broiler breeding joint research task forces.

2021

Guangming No.2 granted the National Certification for New Livestock and Poultry Breeds (broiler breeder), marking China's first-ever breakthrough in indigenous broiler genetic breeding from zero to one.

2025

The inaugural export of Guangming No.2 grandparent stock marks dual breakthroughs: achieving China's first export of domestically-developed poultry breeding stock, while disrupting the decades-long monopoly held by Western corporations in the global GP market.

2010

Embarking on the path of independent breeding for domestic broiler.

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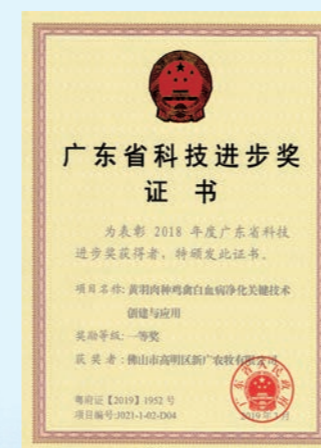
04 | TECHNOLOGICAL PART 04 | ACHIEVEMENTS

No Pains, No Gains



"GuangmingNo.2" obtained the National Certificate of New Breed of Livestock and Poultry.

Certificate number : Nong 09 New Variety Certificate No. 94





Guangming No.2
广明2号

GUANGMING Broiler

05 | GROWTH PART 05 | PERFORMANCE



High meat yield



Premium meat quality



Disease-resistant



Cost-effective



Guangming No.2 Parent Stock Performance Objectives

Guangming No.2	Performance Summary
Liveability (rearing period 0-24 weeks) %	95-96
Liveability (laying period 25-64 weeks) %	92
Age at 5% Egg Production (weeks)	25
Peak Production %	88.5-92
Total Eggs (Hen-Housed Average 25-64 weeks)	185-200
Hatching Eggs (Hen-Housed Average 25-64 weeks)	180-190
Hatchability %	85-87
Chicks/Female Housed at 175 days (25-64 weeks)	150-160

Guangming No.2 Broiler (As-Hatched Performance Objectives)

Guangming No.2	Production Performance
Market-ready Age (d)	38-42
Body Weight (g)	2605-3027
FCR	1.32-1.50
Liveability %	96-97



06 | PREMIUM SEED PART 06 | DISSEMINATION

Guangming Biotech specializes in the research, development, and innovation of broiler breeds, dedicated to becoming a global technology leader in the broiler breeding industry. Through excellence in quality and continuous innovation, we drive industry advancement and provide optimal breeding stock to clients worldwide.

