



2022

CORPORATE SOCIAL RESPONSIBILITY REPORT



Angel Yeast Co., Ltd. was founded in 1986 and listed on the Shanghai Stock Exchange in 2000.

Through years of steady development, the business scale of our company continues to expand. Our yeast and deep-processed products have been widely used for baking and fermenting wheaten foods, food seasoning, brewing, human nutrition and health, animal, plant, microbial nutrition and other fields.

Adhering to the corporate spirit of "Pursue Excellence, Innovation, Keep Improving" and based on the business strategy of concentric diversification, Angel mainly specializes in five industries: yeast, healthy food ingredients, nutritional supplements, biotechnology, and new healthy packaging materials.

In 2022, the brand value of "Angel" reached RMB 19.502 billion, an increase of RMB 4.84 billion compared to the previous year, securing the top position in the China Brand Evaluation List for the food processing and manufacturing category.

- Corporate mission Developing yeast biotechnology,innovate for healthy life
- R&D philosophy Global leading Yeast Enterprise,World class Biotechnology company
- Corporate spirit Pursue Excellence, Innovation, Keep Improving



We respond to the United Nations' Sustainable Development Goals in 5 aspects: hunger eradication, health and well-being, clean energy, climate action, and industrial innovation



Hunger Eradication



Health Well-being



Clean Energy



Climate Action



Industrial Innovation

2
ZERO
HUNGER

Hunger eradication

Promote technological innovation and continuously contribute to the goal of eradicating hunger worldwide

- Angel endeavors to push industrialization of yeast proteins, while also developing sustainable and more effective yeasts to replace proteins, in order to prepare the world for the next global food crisis.
- As one of the largest manufacturers of organic yeast fertilizers, Angel converts yeast fermentation liquid into organic fertilizers to replace chemical fertilizers, with an aim to promote sustainable development of agriculture.

Care for human and natural health

- Angel is committed to popularizing the use of yeast as a substitute for leavening dough and aluminum-free leavening agents, promoting the consumption of healthy food such as rice cakes and aluminum-free fried dough sticks, and transforming traditional food processing practices.
- Angel has established a nutrition and health technology center dedicated to R&D and application technology services.
- Angel replaces high-salt seasonings with yeast extracts to reduce the incidence of hypertension and promote a healthier lifestyle.

3 GOOD HEALTH
AND WELL-BEING



Health and well-being



BIO

7 AFFORDABLE AND CLEAN ENERGY



Clean energy

Utilization of clean energy

- Angel has independently developed comprehensive treatment technologies for the "separation of concentrated and diluted waste streams" and "resource utilization of wastewater", and has taken the lead in establishing the Wastewater Discharge Standards for the Yeast Industry.
- Angel is actively engaged in the development of cellulosic ethanol yeast technology, exploring the conversion of agricultural residues such as straw and waste wood into clean energy sources.
- Angel is constructing intelligent production lines for plant-based nitrogen sources, aiming to address the issue of importing high-end plant-based nitrogen sources.
- Angel is also exploring the use of green energy sources such as biomass steam, clean biogas, and photovoltaic power.

13 CLIMATE ACTION



Climate action

Steady progress in climate action

- The use of yeast protein as a substitute for animal protein can effectively reduce annual deforestation rates and related carbon dioxide emissions by half, while also decreasing methane emissions.
- Angel has formulated targets and pathways for carbon peaking and carbon neutrality, taking the lead in the industry by establishing multiple green yeast factories.

9 INDUSTRY, INNOVATION
AND INFRASTRUCTURE



Industrial innovation

Driving industrial innovation with smart manufacturing

- Angel has achieved full-process intelligent automatic control in their production lines, starting from raw material storage to finished product delivery.
- Angel enables production companies, upstream and downstream supporting enterprises, and end consumers to scan the same QR code and access different application scenarios, thereby enhancing production efficiency and breaking down data silos.

Always bearing the corporate mission of "developing yeast biotechnology and innovating for healthy life" and following a philosophy of developing "natural, nutritious, healthy, and delicious" products, Angel continuously improves product quality to provide market customers with products that surpass industry standards and offer quality yeast and food ingredients to global consumers.

In 2022, Angel's production system operated at full capacity. The total fermentation output for the year hit 327,500 tons, a 3.75% increase compared to the previous year, with yeast extract production reaching 116,400 tons. The production capacity of overseas factories was fully unleashed.

NO.1

15%

Angel has now become the world's largest yeast extract manufacturer and the second-largest yeast supplier, with a global market share exceeding 15%.

3.75%

160

In 2022, the international market experienced rapid growth, with the main business revenue reaching RMB 3.923 billion, a significant increase of 39.02%, compared to the previous year. Angel's products are now distributed in more than 160 countries and regions worldwide.

2022

We are committed to building a yeast brand with global influence and providing consumers with quality products and services.



Promote food safety, nutrition and health with technological innovation, being devoted to becoming the pioneer in the field of healthy life for human beings

In 2022, Angel's total investment in research and development reached RMB 536 million, an increase of 12.84% compared to the previous year.

Angel's R&D efforts have yielded remarkable achievements. The project "Key Technologies and Applications for Industrialization of Deep-Processed Yeast Products" has been internationally recognized as being at the forefront of the industry.

Two jointly declared projects, Functional Food Research and Development and Intelligent Biomanufacturing and Fermentation Optimization and Control System Based on Complex System Theory, received support from the National Key R&D Program.

Angel remains committed to the inevitable trends of promoting public health and global sustainable development, continuously innovating in the field of biotechnology.

It has conducted research on high-protein yeast strains and widely applied them in the seasoning, meat products, plant-based meats, dairy beverages, and nutritional food sectors, offering diverse Angel solutions for future food needs.

Angel strives to enhance the diversity of healthy foods. In 2022, new products such as Bakerdream bread flavor liquid, Bakerdream soft cake premix powder, and Bakerdream red velvet cake premix powder were launched, for which Angel developed 46 color varieties and completed five application technology solutions in response to market demands.

Join hands with excellent partners



For co-creation and win-win results

Angel continuously improves its supplier management mechanisms and fosters a bidding environment with equal opportunities to ensure fair competition and healthy and long-lasting partnerships. Angel actively seeks outstanding research partners to jointly promote industrial technology innovations.

Angel puts a premium on industrial chain construction and constantly taps into other business sectors.

- In 2022, Angel intensified its project construction efforts, optimizing its production capacity layout for yeast, extracts, and other leading products.
- Angel signed a cooperation agreement with Beijing PhaBuilder Biotechnology Co., Ltd. in Yichang to establish a joint venture company. Together, they will construct a 10,000-ton PHA base, in an effort to promote the application of synthetic biology technology in the industrial sector.



Emphasize ecological protection and continuously practice low-carbon emissions to protect our homeland

As a company dedicated to health, nutrition, and bioscience on a global scale, Angel is committed to using innovative science to create a better life for human beings and enhancing their nutrition, health, and well-being. Throughout the entire life cycle, from product development to consumption, Angel upholds the principles of sustainable development and circular economy.

Angel constantly adjusts itself in response to environmental changes, social challenges, and development trends to maintain its leading position. It focuses on innovative research and development of enzyme preparations and application of proteins, nucleic acids, baking, polysaccharides, and other green production lines that possess core competitiveness. Through action, Angel contributes to a greener Earth.

In 2022, Angel initiated the construction project of the Carbon Management Platform in its headquarters area. The project aims to open up channels for carbon reduction, such as clean energy procurement and photovoltaic power generation. The preliminary research and communication for the Carbon Management Platform construction project in the Yichang headquarters area have been completed.

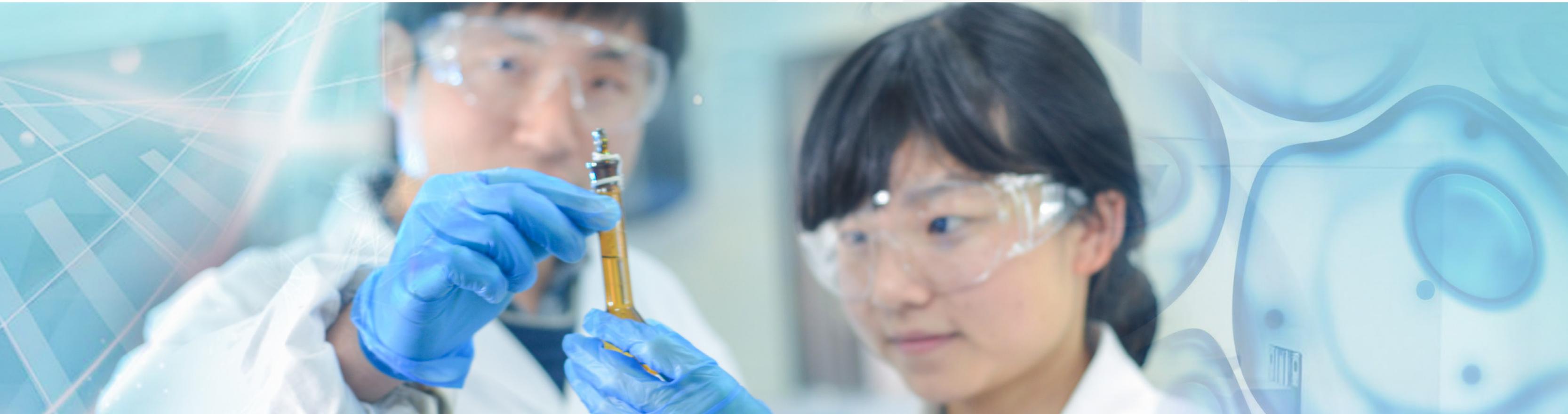
The 30 MW rooftop photovoltaic power generation project for the Chifeng branch has entered the approval stage, while the Hongyu branch has entered the preliminary research stage.

In 2022, Angel continued to promote clean production, contributing to a continuous reduction in energy consumption and pollutant emissions. A total of 25 energy-saving and carbon-reducing equipment improvement projects were completed, contributing to a reduction of 16,000 tons of carbon emissions. The comprehensive energy consumption per unit of product decreased by 1.6% compared to the previous year; the production of biogas residue decreased by 6.57% compared to the previous year, and the biogas residue per unit of product decreased by 6.4%; 18.01 million cubic meters of biogas were recovered, replacing coal to produce 128,700 tons of steam and reducing 39,000 tons of carbon dioxide emissions.

In 2022, Angel purchased 136,000 MWh of green electricity from photovoltaic and wind power sources (including 9,512 MWh in the Yichang region, 16,416 MWh in Chongzuo, 16,900 MWh in Liuzhou, and an estimated 93,329 MWh in Dehong) and 61,600 steam tons of biomass green steam. In the Yichang factory, the pilot-scale verification of environmentally friendly evaporative non-condensing steam treatment was completed, and the engineering application was successfully implemented in Liuzhou. This treatment process eliminates odors and does not require the use of chemical agents. Angel also applied and promoted environmentally friendly technologies such as activated carbon desorption, biowashing, and anaerobic ammonia oxidation in environmental engineering projects.



We take multiple measures to assure safe production and protect our employees' life and property to the utmost



Angel continues to carry out essential safety improvement actions, having promoted 59 improvement projects such as active anti-collision systems for forklifts, visual platforms for important operations, and intelligent equipment for confined spaces, with an aim to ensure safety in essence.

We have successfully completed a three-year special safe production campaign, contributing to the revision or addition of 24 regulations and technical standards.

Throughout the year, we conducted 1,662 safety training sessions for 101,560 individuals, with each receiving 10 sessions on average; 500 emergency drills, involving a total of 17,717 participants.

We set a high premium on our relationship with investors and are constantly elevating our level of information disclosure

In 2022, Angel was evaluated "Class A" in the 2021 annual information disclosure work assessment for listed companies by the Shanghai Stock Exchange. This is the 7th year in a row that Angel acquired the honor in the field of information disclosure. Angel's information disclosure work has been consistently recognized with a "Class A" rating, demonstrating the regulatory authority's high recognition of the Company's information disclosure efforts.

In 2022, Angel maintained comprehensive and continuous communication and exchange with its investors. The Board of Directors actively fostered constructive interactions with investors, maintaining smooth communication with global investors. Monthly conference calls were held with overseas investors, and multiple roadshows were conducted to guide investors in forming objective assessments of the Company's value and enhance the capital market's recognition of the Company's value.

We are committed to providing employees with a diverse and inclusive development platform

In 2022, Angel had a total of 11,708 employees, with female staff accounting for 26.84% of the workforce. There were 22 female middle-level managers, fully leveraging the significant role of women in the Company's development.

Angel has scientific career development pathways to provide employees with broad opportunities for growth. The Company continuously improves its job ranking system and has set up scientific and reasonable career development pathways for sales, technology, production, and functional roles; the qualification standards for various positions have been enhanced, and dual career development channels for management and business (technology) have been established, facilitating the recognition and advancement of different talents.

The Company has made continuous efforts to engage more young employees in the leader team, including the post-80s and post-90s, and introduced a job rotation and exchange mechanism to evaluate their performance on a regular basis.

A sound employee training system has been developed to continuously enhance the employees' skills and qualifications. In 2022, Angel achieved a training completion rate of over 90%, with an average of over 24 hours of training per employee annually. In 2022, through the ZhiNiao platform, the Company conducted a total of 2,245 compulsory courses, live training sessions, and exams, reaching 125,008 employees. This effectively improved employee competence and laid a solid foundation for their personal development.



We actively participate in social welfare undertakings and shoulder social responsibilities

The controlling shareholder of the Company, Angel Group, has been actively involved in Hubei's aid to Tibet, and has invested in the construction of an intelligent project for high-altitude probiotics. After the project is put into operation, it is expected to advance the high-altitude microbial industries, drive the modernization of traditional industries, and upgrade distinctive industries.



Amid the changing tides of the era, Angel remains true to its original aspiration.

In 2023, Angel will continue to uphold the corporate mission of "developing yeast biotechnology and innovating for healthy life," integrate the concept of "mutual benefits and win-win results" among shareholders, creditors, customers, suppliers, employees, the environment, and society into our production and operation activities, in a bid to consistently provide healthy and high-quality products and services. Adhering to the core values of "staff as the base, customers as the orientation, and technology and quality as the driving force", we will strive to create greater value for our customers, continue to undertake social responsibilities, actively participate in public welfare activities, and repay society with a grateful heart.



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