China's Position and Core Advantages in the Global Supply Chain of Purslane Extract Powder

As a core raw material with both "medicine-food homology" and natural functional properties, purslane extract powder is widely used in cosmetics, pharmaceuticals, functional foods, health products, and other fields. Its core active ingredients, including ω-3 fatty acids, flavonoids, and amphiphilic mucoproteins, endow it with unique value in anti-inflammatory, moisturizing, hypoglycemic, and antibacterial applications. The global supply chain has formed a complete system covering "raw material planting → extraction and processing → testing and certification → market circulation". Relying on its unique resource endowments, continuously evolving extraction technologies, comprehensive industrial chain layout, and advantages in large-scale and intensive production, China has established itself as the core hub of the global purslane extract powder supply chain, serving as the "primary engine of supply" and "benchmark for quality" in the global market. Its influence permeates every link of the supply chain, dominating the global supply pattern, quality standards, and development trends, and continues to expand its global competitive advantages through the dividends of industrial transformation.

I. China's Core Position in the Global Supply Chain of Purslane Extract Powder

China holds an "irreplaceable core hub" position in the global supply chain of purslane extract powder. Driven by the comprehensive advantages of resources, technology, and the industrial chain, it maintains an absolute leading position in three core dimensions: production capacity supply, market share, and industrial chain control. Supported by solid data, its position is continuously consolidated, and it forms a distinct differentiated advantage over other producing countries, making it difficult to replace.

1. The "First Pole" of Global Production Capacity Supply, Leading the Total Global Supply

China is the world's largest producer of purslane extract powder, with its production capacity, actual output, and product specification coverage ranking first globally. It serves as the most core supply source in the global market, particularly dominating the supply of mid-to-high-end products. As of 2025, the total global production capacity of purslane extract powder is approximately 4,800 tons, of which China's capacity reaches 2,736 tons, accounting for 57% of the global total. It is projected to increase to 62% by 2032 with the expansion of the global market, and the production capacity will continue to grow steadily, maintaining an industry-optimal capacity utilization rate of 64.7%. In terms of output, China's annual production of purslane extract powder reached 2,078 tons in 2025, accounting for 61% of the global total, far exceeding other major producing countries such as India (18%), Turkey (10%), and the United States (5%). Among these, high-quality extract powder produced using low-temperature wall-breaking, ultra-fine pulverization, and freeze-drying compounding processes accounts for 68.3%, corresponding to an output of approximately 1,410 tons. In terms of product category coverage, China can scale up the production of full-specification, full-category products, including cosmetic-grade (including mucoprotein-enriched types), pharmaceutical-grade (high-purity flavonoids), and food-grade (ω-3 fatty acid-enhanced types), with purities ranging from 30% to 98%. This enables it to meet the diverse needs of different

markets and customers worldwide, with global leading supply flexibility and comprehensiveness. Among them, high-purity extract powder (purity ≥ 90%) has an annual output of 312 tons, accounting for 72% of the global total high-purity product output, leading the global supply of high-end raw materials and making up for the shortage of large-scale high-purity product production in other countries.

2. The "Core Hub" of Global Market Circulation, Controlling Trade Leadership

China is the world's largest exporter of purslane extract powder, with both export volume and value ranking first globally. Its trade network covers major consumer markets worldwide, enabling it to control the circulation leadership of the global market. Meanwhile, the huge domestic consumer demand forms a two-way cycle, further consolidating its core position. In 2025, China's total export volume of purslane extract powder reached 128 million US dollars, a year-on-year increase of 25.7%, with an export volume of 1,320 tons, accounting for 68% of the global total export volume. Export orders account for 12.6% of the industry's total orders, and the export price is significantly lower than the global average, highlighting a significant cost-performance advantage.

The export market distribution features a "diversified layout with key focus areas". The main export destinations include South Korea (31.5%), Japan (18.7%), the United States (15.3%), Germany (10.2%), and Southeast Asian countries. Exports to South Korea and Japan mainly supply the local cosmetics and functional food industrial chains, while exports to European and American markets are dominated by high-purity pharmaceutical-grade and food-grade extract powder, which have obtained international authoritative certifications such as the EU EP, US FDA, and Japan's Ministry of Health, Labour and Welfare, allowing direct access to major global markets. At the same time, China is also a core consumer of purslane extract powder globally. In 2025, the domestic market size of purslane extract reached 757 million RMB, of which the market size of purslane extract powder was 517 million RMB, accounting for 32% of the global market share. This has formed a two-way circulation pattern of "production capacity supply → domestic consumption → global export". The continuous growth of domestic demand further supports the large-scale expansion of production capacity and consolidates the core position of the supply chain.

3. The "Dominant Player" of the Global Industrial Chain, Controlling the Right to Speak in Core Links

China has formed a complete industrial chain for purslane extract powder, covering "upstream raw material planting → midstream extraction and processing → downstream deep application → supporting service support". It has absolute advantages in each core link, controlling the right to speak in the global supply chain. In contrast, other producing countries are mostly at the low end of the industrial chain, highly dependent on China. In the upstream planting link, China has built the world's largest and most standardized purslane planting bases, implementing a dual layout of "large-scale artificial planting + wild resource protection". In the midstream extraction and processing link, China's extraction technology, production scale, and product quality are at the global leading level, taking the lead in breaking through industry technical bottlenecks. In

the downstream application link, China has the world's largest cluster of cosmetics, pharmaceutical, and functional food processing industries, providing broad application scenarios for extract powder. In the supporting service link, China has established a sound testing and certification, logistics and warehousing, and R&D innovation system, providing comprehensive support for the efficient operation of the supply chain.

In contrast, other producing countries such as India and Turkey are mainly concentrated in the upstream raw material planting or primary extraction links, lacking a complete industrial chain layout. India mainly relies on wild purslane collection, with large fluctuations in raw material supply and uneven quality. Its extraction technology is backward, only capable of producing low-purity primary products, which need to be deep-processed using China's processing technology. Although European and American countries have mature downstream application markets, they face a shortage of upstream planting resources and high production costs, with their raw materials and primary processed products highly dependent on imports from China, making it impossible to form an independent supply chain system. This further highlights China's dominant position in the global supply chain. In addition, China's leading enterprises have a significant market share advantage, with an industry CR5 (Concentration Ratio of Top 5 Enterprises) of 58.3%. Leading enterprises continue to enhance their industrial chain control through large-scale production and technological innovation, leading the global quality standards and development trends of purslane extract powder.

II. China's Core Advantages in the Global Supply Chain of Purslane Extract Powder

China's establishment of a core position in the global supply chain of purslane extract powder stems from its core advantages in five dimensions: resources, technology, industrial chain, cost, and policy. These advantages support and synergize with each other, forming an irreplicable comprehensive competitiveness. Each advantage is supported by clear data and practical cases, combining professionalism with practicality, and driving the industry's transformation from traditional wild vegetable processing to a high-value-added natural raw material industry.

1. Resource Endowment Advantage: Unique Planting Conditions Ensure Stable Raw Material Supply and Quality

Purslane has strong adaptability to growth, but high-quality purslane (with high active ingredient content and low oxalic acid) requires specific climatic and soil conditions, preferring a warm and humid environment with sufficient sunlight, fertile soil, and good drainage. Multiple regions in China's south and north meet these growth requirements, making it one of the world's most suitable regions for purslane planting. This provides a solid guarantee for raw material supply in the upstream of the supply chain. Meanwhile, through variety improvement and standardized planting, the quality and supply stability of raw materials are further enhanced.

1.1. Extensive and Scalable Planting Areas

Purslane planting in China shows a pattern of "coordinated development in south and north with concentrated core producing areas", mainly concentrated in provinces such

as Shandong, Henan, Jiangsu, Guangxi, Yunnan, and Fujian. Among them, Linyi in Shandong is the largest artificial purslane planting base and the core of the industrial cluster in China, forming a replicable "Linyi Model". As of 2025, the total planting area of purslane in China has reached 52,000 mu, an increase of 85.7% compared with 28,000 mu in 2020, representing a global leading level of large-scale planting. Among them, Linyi in Shandong has a planting area of 18,000 mu, with an annual output of 12,000 tons (fresh grass), accounting for 35.3% of the national total output. The planting areas in Henan and Jiangsu are 9,000 mu and 7,000 mu respectively, accounting for 30.8% of the national total planting area. In addition, China is rich in wild purslane resources, mainly distributed in the northeast, north China, and northwest regions. Through rational protection and standardized collection, approximately 8,000 tons (fresh grass) of wild raw materials can be provided annually, supplementing the supply of artificial planting raw materials and alleviating the industry's raw material gap (currently, artificial planting can only meet 40% of the market demand).

1.2. Superior Raw Material Quality with Outstanding Core Active Ingredient Content

Purslane planted in China, especially varieties from producing areas such as Shandong, Guangxi, and Yunnan, has significantly higher content of core active ingredients than those in other countries due to suitable climate and mineral-rich soil, with low oxalic acid content, highlighting prominent quality advantages. According to authoritative testing, the content of ω-3 fatty acids in scale-planted purslane in China reaches 300-400 mg/100g of fresh leaves, twice that of hairtail fish, far exceeding that in India (200-280 mg/100g of fresh leaves) and Turkey (180-250 mg/100g of fresh leaves). The content of flavonoid core active ingredients is stably maintained at 1.2%-1.8%, and through technological improvement in some experimental fields, the active ingredient content has been increased to over 2.5%, an increase of more than 40% compared with traditional planting. The content of amphiphilic mucoprotein reaches 2.1%-2.7%, which is suitable for antioxidant, anti-inflammatory, and moisturizing applications in the cosmetics field. At the same time, the oxalic acid content in purslane planted in China is controlled at 970-1100 mg/100g, much lower than that of wild varieties (1460 mg/100g), solving the industry pain point of high oxalic acid content in wild raw materials. The excellent quality of raw materials lays a core foundation for subsequent extraction of high-purity and high-quality purslane extract powder.

1.3. Stable and Controllable Raw Material Supply, Mitigating Market Fluctuation Risks

China has achieved a dual layout of "large-scale artificial planting + wild resource protection", which not only avoids ecological damage and resource depletion caused by excessive wild resource collection but also ensures the stability of raw material supply, effectively addressing supply fluctuations caused by climate change (e.g., a 12% reduction in the Shandong producing area due to drought in 2025 did not significantly impact the supply chain through the adjustment and reserve of raw materials from other producing areas). Meanwhile, leading domestic planting enterprises adopt a "company + base + farmers" model, establishing standardized planting processes and conducting full-process control over planting, harvesting, drying, and storage links to ensure uniform and stable raw material quality. The proportion of GAP (Good Agricultural Practice) certified planting bases has reached 55%, an increase of 23 percentage points compared with 2020. In addition, leading planting enterprises in Shandong, Guangxi, and other regions supply over 75% of the wild purslane raw material market in China, further enhancing the controllability of raw material supply and effectively mitigating risks brought

by international raw material trade fluctuations and wild resource depletion.

2. Technological R&D Advantage: Leading Extraction Technology, Achieving Dual Breakthroughs in Quality and Efficiency

The midstream extraction and processing link is the core determinant of purslane extract powder quality. After decades of technological accumulation and innovation, China has formed a mature and advanced extraction technology system, taking the lead in breaking through three major industry technical bottlenecks. It is at the global leading level in extraction efficiency, product purity, active ingredient retention, and green environmental protection, with its technological advantages continuing to expand. Meanwhile, it has built a sound R&D and innovation system, promoting continuous improvement in product value-added.

2.1 Diversified and High-end Extraction Processes, Breaking Through Industry Technical Bottlenecks

China has broken through the limitations of traditional water extraction and alcohol extraction processes, widely applying advanced technologies such as supercritical CO_2 extraction, macroporous resin adsorption, membrane separation, enzyme hydrolysis-pulsed electric field coupling, and gas-expanded liquid extraction, effectively solving the industry pain points of high active ingredient loss, high solvent residue, and large batch differences in traditional processes. Among them, supercritical CO_2 extraction technology can effectively retain the core active ingredients of purslane, with an extraction rate 28% higher than that of traditional alcohol extraction technology, no solvent residue, and an active ingredient retention rate of 95%, making it the mainstream process for leading domestic enterprises. In 2025, Guangdong Liyan Cosmetic Intelligent Manufacturing Biotechnology Co., Ltd. developed an enzyme hydrolysis-pulsed electric field coupling + deep eutectic solvent extraction technology, which improves cell wall permeability through cellulase pretreatment and enhances extraction through pulsed electric field, further increasing the flavonoid extraction rate to over 92% and the active ingredient retention rate to 98%, with no organic solvent residue, suitable for high-end cosmetic raw material production. The large-scale application of vacuum freeze-drying technology solves the problem of nutrient loss rate exceeding 30% caused by traditional hot air drying. Although the equipment cost is high, leading enterprises have gradually achieved popularization through large-scale production to spread the cost, further improving product quality.

2.2. Leading Product Purity and Quality, Meeting International Standards

Relying on advanced extraction and purification technologies, China has achieved large-scale breakthroughs in the purity of purslane extract powder. Currently, it can stably produce full-specification products with purities ranging from 30% to 98%, among which pharmaceutical-grade extract powder has a purity of over 98% (detected by HPLC), far exceeding the 30%-70% range in India, Turkey, and other countries. The batch difference is controlled within 5%, solving the industry technical problem of 15% batch difference in extract products. In 2025, the output of high-purity extract powder (≥90%) in China accounted for 15%, while the global average was only 8%, highlighting a significant advantage in high-end product supply. At the same time, domestic enterprises strictly comply with international standards such as the Chinese Pharmacopoeia, ISO, and EP, establishing a full-process quality control system. The indicators such as heavy metals, pesticide residues, and solvent residues in products meet the access requirements

of major global markets. The product qualification rate reached 92% in 2024, a significant increase from 73% in 2020, among which the export product qualification rate exceeds 98%, gaining wide recognition in the global market.

2.3. Strong R&D and Innovation Capabilities, High Efficiency in Achieving R&D Outcomes

China has formed an R&D system led by enterprises, supported by universities, and coordinated by research institutes, focusing on core fields such as extraction process optimization, active ingredient separation, product innovation, and variety improvement. R&D investment has continued to increase, and the number of patent outcomes is abundant. As of the end of 2025, the cumulative number of patents related to purslane extract in China has reached over 960, accounting for 41% of the global total patents, among which patents related to extraction processes account for 48%. More than 150 new patents were added in 2025 alone, including the new preparation method patent of Guangdong Liyan Cosmetic Intelligent Manufacturing Biotechnology Co., Ltd. Leading domestic enterprises such as Shandong Lvkangyuan Biotechnology and Guangxi Changzhou Natural Medicine have established professional R&D teams composed of senior researchers in pharmacy, chemical engineering, and bioengineering, with technological strength reaching the international advanced level. At the same time, universities such as Jiangnan University, China Pharmaceutical University, and Shandong Agricultural University focus on the research on active ingredients and variety improvement of purslane, promoting the rapid transformation of scientific research outcomes. They are focusing on developing new purslane varieties with low oxalic acid and high disease resistance, alleviating the problem of lagging breeding progress, and further consolidating the technological leading advantage.

3. Industrial Chain Advantage: Comprehensive Layout and Significant Synergistic Effects

China is the world's only country that has achieved a "full industrial chain closed-loop layout" for purslane extract powder. From upstream raw material planting to downstream terminal applications, each link has formed a large-scale and standardized development trend. The synergy of each link has significantly improved supply chain efficiency, reduced operational costs, and formed a strong industrial chain barrier, driving the industry's transformation from primary processing to high-end and integrated development. The mature "planting-processing-R&D" integrated industrial cluster in Linyi, Shandong, provides replicable experience for the industry.

3.1. Upstream Planting: Large-scale and Standardized, High Raw Material Self-sufficiency Rate

The large-scale and standardized degree of purslane planting in China is the global leading level, forming core producing areas such as Shandong, Henan, Jiangsu, and Guangxi, with a planting area of 52,000 mu and an annual output of over 34,000 tons (fresh grass). This can meet more than 70% of the raw material demand for domestic extraction and processing, with a raw material self-sufficiency rate of 72%, an increase of 18 percentage points compared with 2020, effectively mitigating the risks of international raw material trade fluctuations. Meanwhile, the standardized planting process has been continuously improved, with the proportion of GAP-certified planting bases reaching 55%. Leading enterprises use the Internet of Things to achieve precise irrigation and scientific fertilization, improving the stability of raw material quality. The "company + base +

farmers" model drives farmers to participate in planting, forming a large-scale planting cluster, further reducing planting costs and enhancing the stability and controllability of raw material supply.

3.2. Midstream Processing: Significant Enterprise Cluster Effects and High Degree of Large-scale Production

The cluster effect of purslane extract processing enterprises in China is significant, with more than 60 processing enterprises nationwide, including 28 large-scale enterprises, mainly concentrated in provinces such as Shandong, Guangxi, Jiangsu, and Shaanxi, forming an industrial cluster. Among them, 17 large-scale processing enterprises are concentrated in Linyi, Shandong, accounting for 60.7% of the total number of large-scale enterprises in the country. Leading enterprises such as Shandong Lvkangyuan Biotechnology and Guangxi Changzhou Natural Medicine have advanced GMP production lines, equipped with more than 80 sets of modern extraction, separation, purification, and drying equipment, with an annual input volume of over 2,500 tons and an annual output value of over 100 million RMB. The industry CR5 is 58.3%. With the advantage of large-scale production, leading enterprises further improve processing efficiency and reduce unit costs, while promoting the green and low-carbon transformation of the processing link through technological upgrading, which aligns with the global trend of environmental protection and development.

3.3. Downstream Application: Diversified Scenarios, High Demand-driven Role

China has the world's largest cluster of terminal application industries, with strong demand in the cosmetics, pharmaceutical, and functional food sectors, providing broad channels for the digestion of purslane extract powder and forming a virtuous cycle of "demand driving supply and supply supporting demand". Among them, the functional food sector accounted for 61.4% in 2025 (2025). Relying on the high ω-3 fatty acid and hypoglycemic properties of purslane, products such as hypoglycemic tea, dietary supplements, and Omega-3-enhanced drinks have been developed, among which functional products targeting diabetic patients have been gradually launched into the market, driving the growth of raw material demand. The cosmetics sector accounted for 27.8%, with social media voice volume continuing to rise in recent years. The skin care market size reached 190 million RMB in 2025, with a year-on-year growth rate of nearly 100%. The sales volume of a certain international brand's purslane essence exceeded 100 million RMB in its first year on the market. Mainstream domestic skin care brands such as Winona and Proya use it as a core functional ingredient, driving continuous growth in raw material procurement. In the pharmaceutical field, as a variety included in the Chinese Pharmacopoeia, the number of domestic pharmaceutical products and medical device filings containing its extract has exceeded 80, an increase of 60% compared with 2020. Related preparations such as Qingre Zhili Wan (Anti-dysentery Pill for Clearing Heat) have an annual sales volume of over 200 million RMB, further expanding the application scenarios of raw materials.

3.4. Supporting Services: Sound System, Supporting Efficient Supply Chain Operation

A sound supporting system provides a solid guarantee for the efficient operation of China's purslane extract powder supply chain, covering testing and certification, logistics and warehousing, supply chain finance, and other fields. In terms of testing and certification, multiple professional testing institutions have been established in China, which can conduct full-index testing of active ingredient content, heavy metals, pesticide residues, solvent residues, etc. The testing technology is aligned with international standards,

meeting the testing needs of different global markets and ensuring product quality compliance. In terms of logistics and warehousing, relying on logistics hubs in producing areas such as Shandong and Guangxi, a logistics network of "origin warehousing → national distribution → global export" has been formed. It is adjacent to ports (such as Qingdao Port in Shandong and Qinzhou Port in Guangxi), with high logistics efficiency and low costs, enabling the rapid delivery of extract powder to global customers. The domestic logistics cost is 22%-27% lower than that in India. In terms of supply chain finance, financial institutions provide special credit support for various links in the industrial chain, focusing on supporting the construction of standardized planting bases and technological upgrading of processing enterprises, alleviating the capital pressure of enterprises, and promoting the continuous upgrading of the industrial chain.

4. Cost Advantage: Large-scale and Intensive Production, Leading Cost-performance in the Global Market

Driven by its comprehensive industrial chain layout, large-scale production, and low production factor costs, China has formed a global leading cost advantage. The cost-performance ratio of purslane extract powder is significantly higher than that of other countries, which is one of the core competitiveness factors for China's products to dominate the global market. The cost advantage is mainly reflected in three aspects: raw materials, processing, and logistics. The comprehensive cost is lower than the global average, further enhancing the market competitiveness of products.

4.1 Low Raw Material Cost and Strong Supply Controllability

The large-scale degree of artificial purslane planting in China is high, and the "company + base + farmers" model reduces planting costs. At the same time, the raw material self-sufficiency rate is 72%, eliminating the need to pay a large amount of import tariffs and international transportation costs. The raw material cost is 18%-23% lower than that in India and 32%-42% lower than that in South Korea and Japan. In addition, China is rich in wild purslane resources, and rational collection can supplement raw material supply, further reducing raw material procurement costs. Standardized planting reduces raw material loss, with the loss rate controlled within 8%, much lower than the 15%-20% in India and other countries, further highlighting the raw material cost advantage.

4.2. Low Processing Cost and Significant Scale Effect

In the midstream processing link, the significant cluster effect of enterprises and large-scale production reduce unit processing costs such as equipment depreciation, labor, and energy consumption. The industry CR5 is 58.3%, and the large-scale advantages of leading enterprises further amplify the cost dividend. At the same time, China's labor cost, electricity cost, and land cost are all lower than those in South Korea, Japan, Europe, and the United States, further reducing processing costs. For example, the processing cost of producing 90% purity purslane extract powder using supercritical CO_2 extraction technology is 42%-52% lower than that in South Korea and 62%-72% lower than that in Europe and the United States. The large-scale application of vacuum freeze-drying technology, although with high initial equipment investment, further reduces the unit processing cost and improves cost-performance through capacity release.

4.3. Low Logistics Cost and Obvious Export Advantages

Purslane producing areas in China are concentrated, and it is adjacent to ports (such as Qingdao Port in Shandong and Qinzhou Port in Guangxi). The logistics network is well-developed, with domestic logistics costs 22%-27% lower than those in India and export logistics costs 17%-32% lower than those in India. At the same time, the batch advantages formed by large-scale exports can reduce the unit costs of sea transportation, customs declaration, and other links, further improving cost-performance. In addition, the rapid development of domestic logistics enterprises has realized the efficient distribution of raw materials and finished products, shortened the supply chain cycle, reduced logistics loss, and further lowered the comprehensive logistics cost.

Overall, the comprehensive cost of China's purslane extract powder is 28%-38% lower than the global average. Under the premise of the same purity and quality, the price is 12%-17% lower than that in India and 27%-37% lower than that in South Korea and Japan. The high cost-performance has become the core advantage for China's products to capture the global market. In 2025, the average price of 40% content extract powder is far lower than that of international similar products, further enhancing market competitiveness.

5. Policy and Market Advantages: Policy Support to Ensure Development, Market Demand to Drive Upgrading

The policy support from the Chinese government and the huge domestic market demand provide strong support for the development of the purslane extract powder supply chain, promoting the continuous upgrading of the supply chain and further consolidating its global core position. Meanwhile, the continuous improvement of international market recognition injects new momentum into industrial development, helping the industry transform from traditional wild vegetables to a 100 million RMB natural raw material industry.

5.1. Strong Policy Support, Promoting Industrial Standardized Upgrading

The Chinese government has included the plant extract industry in the "14th Five-Year Plan" for the development of traditional Chinese medicine, included purslane in the key development variety list of traditional Chinese medicine and the list of medicine-food homology varieties, and issued a series of support policies to protect the development of the industry. On the one hand, it increases support for upstream purslane planting, subsidizing the construction of standardized planting bases, planting technology training, and germplasm resource library construction, promoting the large-scale and standardized development of planting. It plans to build 12 standardized planting demonstration bases by 2030, with the target annual output increased to 60,000 tons (fresh grass) to alleviate the raw material supply gap. On the other hand, it supports technological innovation of midstream processing enterprises, providing tax breaks and financial subsidies for extraction process upgrading and R&D investment, encouraging enterprises to obtain international certifications such as GMP and ISO, promoting products to go global. At the same time, it has issued environmental policies to promote the green and low-carbon transformation of processing enterprises and enhance the international competitiveness of products. In addition, local governments promote industrial upgrading

by setting up special funds and building industrial clusters. The mature industrial cluster model in Linyi, Shandong, provides a demonstration for the development of the national industry.

5.2. Strong Domestic Market Demand, Driving Supply Chain Upgrading

China is one of the world's largest consumers of purslane extract powder. In 2025, the domestic market size of purslane extract powder reached 517 million RMB, with a compound annual growth rate of 24.3% (2020-2025), showing strong and sustained market demand. The vigorous development of the domestic cosmetics, pharmaceutical, and functional food industries has formed a huge demand market. Especially in the functional food sector, with the improvement of residents' health awareness, the demand for ω-3 fatty acid supplementation has increased, driving the surge in demand for purslane extract powder. In 2025, the consumption proportion in the functional food sector reached 61.4%, a significant increase from 45.2% in 2020. In the cosmetics sector, the "ingredient party" consumption trend has driven the demand for natural functional ingredients, and the anti-inflammatory and moisturizing effects of purslane extract have been favored by the market, leading to continuous growth in raw material procurement. In the pharmaceutical field, the continuous expansion of clinical application scenarios has further increased the demand for raw materials. The huge domestic demand has driven the continuous upgrading of upstream planting and midstream processing links, promoting technological innovation and product quality improvement, and providing a guarantee for large-scale enterprise production while further reducing costs.

5.3. Increasing International Market Recognition, Expanding Influence Continuously

Purslane extract powder from China has been widely recognized in major global markets with excellent quality and high cost-performance, and its export market share has continued to rise, accounting for 68% of the global total export volume in 2025, a significant increase from 45% in 2020. At present, Chinese products have obtained international authoritative certifications such as the EU EP, US FDA, and Japan's Ministry of Health, Labour and Welfare, allowing direct access to major global markets. Meanwhile, domestic enterprises actively expand the international market, establishing long-term cooperative relationships with international well-known enterprises such as L'Oreal, Estée Lauder, and AmorePacific. In 2024, the revenue of international well-known enterprises' purslane-related products in the Chinese market reached 890 million RMB, further enhancing the international influence of Chinese products. In addition, Chinese enterprises actively participate in the formulation of international standards, promoting the alignment of Chinese standards with international standards, gradually enhancing the right to speak in the global supply chain, successfully capturing the traditional market share of India, Turkey, and other countries, and continuously expanding international influence.

III. Advantage Summary and Future Development Outlook

In summary, China holds an irreplaceable core hub position in the global supply chain of purslane extract powder, serving as the global production capacity supply center, market circulation hub, and industrial chain leader. The establishment of this position stems from China's unique resource endowments, leading extraction technologies,

comprehensive industrial chain layout, significant cost advantages, and dual support from policies and the market. The five core advantages synergize and form a combined force, constructing an irreplicable comprehensive competitiveness for Chinese products, promoting the continuous growth of China's purslane extract powder market share in the global market, dominating the development trend of the global supply chain, and driving the industry's transformation from traditional wild vegetable processing to a high-value-added natural raw material industry, contributing to the implementation of the rural revitalization and Healthy China strategies.

In the future, with the continuous growth of global demand for natural functional raw materials and the continuous innovation of domestic technologies and the upgrading of the industrial chain, China's core position in the global supply chain of purslane extract powder will be further consolidated. On the one hand, enterprises will continue to focus on technological innovation, promoting the extraction process to become more efficient, green, and precise, focusing on breaking through new technologies such as synthetic biology, enzyme modification, and variety improvement, solving industry pain points such as lagging breeding and insufficient process stability, and enhancing product value-added. On the other hand, it will further improve the industrial chain layout, promote the standardization and intensification of upstream planting, expand the scale of artificial planting to alleviate the raw material supply gap, promote the high-end and green transformation of midstream processing, improve product quality and stability, promote the diversification of downstream applications, and expand new scenarios such as pet care and metabolic disease auxiliary conditioning. Meanwhile, it will strengthen international cooperation, promote the alignment of Chinese standards with international standards, enhance the right to speak of China in the global supply chain, actively respond to potential risks such as international standard differences and climate change, develop C-end functional products, and improve consumer awareness. In addition, relying on policy support, it will promote the upgrading of industrial clusters, cultivate more leading enterprises, realize the high-quality development of China's purslane extract powder industry, and continuously provide stable, high-quality, and high-cost-performance product supply for the global supply chain, contributing to the healthy development of the global natural functional raw material industry.