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The Research Progress of Eel Culture in Yangzhou City, Jiangsu Province, East China

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The total area of Gaoyou City is 1963 square kilometers, of which the land area is 1175 square kilometers and the water surface is 788 square kilometers. The history of aquaculture is long, the area of astragalus breeding is large, and the demand for seedlings is high. At present, all the seedlings of Astragalus membranaceus are wild seed. Carrying out this project in Gaoyou area not only solves the problem of shortage of seedlings of local farmers, but also has a strong help to the implementation and promotion of this project. The project is "Key Technology Research and Industrialization of Greenhouse Astragalus Ecological Breeding and Artificial Breeding". It will build 200 mu of greenhouse yellow box cage culture and its large-scale breeding base in Liulin Village, Sancha Town, Gaoyou City, Jiangsu Province. The 1,500-acre paddy field raises the three-dimensional breeding area and radiates to the Huanghua farming industry in Yangzhou, Northern Jiangsu, Anhui and Shandong. The project is attributed to special aquaculture in the aquaculture industry. In the cultivation of Astragalus membranaceus, seedling propagation technology is a key issue that must be solved. In the opening stage of Astragalus membranaceus, the main feeding is red worm and cooked egg yolk. In the breeding stage, the squid and small miscellaneous fish paste are the main foods. In the adult culture stage, artificial compound feed is mainly used to increase the growth rate. The innovation and key technologies of this project include the use of ecological ripening technology and drug-promoting technology (hormone and drug bait) to achieve early propagation of scutellaria and increase seedling yield; artificial addition of fatty acids, vitamins, Chinese herbal medicines and multi-dimensional electrolyte active ingredients, research and development Feeding high-efficiency feed of Astragalus membranaceus greatly improves the food intake, growth rate and quality of sputum. Integrating greenhouses + soilless pools + cages, three technical advantages, greenhouse green house insulation and moisturizing to achieve jaundice wintering, geomembrane breeding pool anti-seepage, anti-collapse, prevention of pests and diseases, cages to ensure high-density breeding health and improve feed utilization, the technical system It has become the most promising fishery model for freshwater aquaculture facilities.

Established an eco-economic industrial chain. Form an eco-economic industrial chain of "cultivating sorghum water, raising chickens → chicken manure → red worms → saplings → organic sputum", improve breeding efficiency, reduce the amount of chemical fertilizers and pesticides, triple the chain, protect the water and soil environment, and improve the quality of organic carp. Eco-chain 1: Use acacia to breed water plants, such as water lotus, foxtail, water spinach, water peanuts, etc., water grass feed chicken, raise land sputum, sputum refining as the open feed of scutellaria, symbiosis and mutual benefit, water grass waste resources utilization. Eco-chain 2: The use of chicken manure waste for a large

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number of chickens, the fertilization of water silkworms in the rice field after fermentation, and the water silkworm as the opening bait of the yellow saplings, improve the survival rate of the seedlings, solve the problem of insufficient open bait, and realize Recycling and pollution-free treatment of chicken manure nutrition. Eco-chain 3: Feeding feed in the soil-free culture pond produces residual bait feces, and a large amount of free nutrients cannot be taken out. After the special water plants are put into the water, the water plants grow vigorously to produce new growth points, and the purified water body nutrients are obtained, and the water body purification and transformation are realized. It is a high-quality aquatic grass feed that can be used as a source of alfalfa feed, chicken feed, and organic fertilizer green fertilizer to realize the resource utilization of waste.

The nutritional, medicinal and research value of Astragalus membranaceus is extremely high, and it is said in Japan, South Korea, etc. that "medicine, Shou"" is widely circulated. In recent years, China's exports of scutellaria have been growing steadily, nearly 200,000 tons, mainly exported to Hong Kong and Macao, Japan and South Korea, while the domestic market demand is 3 million tons. Since the 1990s, the demand for jaundice in China has increased by 30-40% every year. The annual demand for commodities in Wuhan and Guangzhou alone has reached more than 100,000 tons, and the sales price has also increased year by year. Shanghai Tongchuan Aquatic Products Market has a daily sales volume of 100,000 kg, with sales exceeding 50 million yuan, while Nanjing, Wuhan, Chongqing, Chengdu, Hefei and other places have sales of more than 10,000 kg per day. However, in the face of the huge demand for jaundice, the research and history of oyster farming is relatively short. There are still many bottlenecks in artificial breeding. It is necessary to overcome: 1) The scutellaria breeding, compound feed and pest control technologies have not been fundamentally solved. Higher; 2) The cultured seedlings still depend on wild resources, the success rate of breeding is limited by the weather, the production season is too concentrated (from the end of June to October); 3) there is no real full-price compound feed, the production of jaundice Feeding can not get rid of the large-scale use of live fish such as small fish, cockroaches, etc.; 4) Organic farming and factory farming of Astragalus membranaceus is still blank, and the growth period is short, and it is impossible to successfully winter. In the cultivation of Astragalus membranaceus, seedling propagation technology is a key issue that must be solved. The use of ecological ripening technology and drug-promoting technology (hormone and bait) to achieve early propagation of scutellaria and increase seedling yield. In addition, the project combines three technical advantages, such as greenhouses, hydro-aquaculture ponds and cage culture, to establish an annual ecological farming model for facilities. It has the characteristics of environmental control, high density and intensification, and realizes the anti-season cultivation of Astragalus membranaceus and the two batches of Astragalus aquaculture in one year, and obtains the output of 1000kg/mu. In the opening stage of Astragalus membranaceus, the main feeding is red worm and cooked egg yolk. In the breeding stage, the squid and small miscellaneous fish paste are the main foods. In the adult culture stage, artificial compound feed is mainly used to increase the growth rate. Artificially added Chinese herbal medicine and multi-dimensional electrolyte active ingredients, research and development to promote the feed of scutellaria, greatly improve the food intake, growth rate and quality of sputum. Effectively solve the problem of insufficient seedlings of Astragalus membranaceus in the north of the Yangtze River, lack of food, low survival rate in winter and low economic benefits, use greenhouse warming to achieve anti-seasonal cultivation and annual batch of continuous breeding of jaundice, and greatly increase the supply of Astragalus.