# Study on Environmental Cost Control in Pig Scale Breeding

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**Abstract**: The cost of pig breeding enterprises in China remains high and the benefits are declining. How to reduce costs and increase efficiency is an important practical problem faced by pig breeding enterprises at present. This paper takes New Hope Group as the research object, based on its aquaculture management model and financial data, deeply reveals the problems in its large-scale aquaculture management and cost control, and defines the connotation and objectives of environmental cost control of aquaculture enterprises from the perspective of changing the engineering construction model; Secondly, it analyzes the current situation and problems of environmental costs in pig farms; Then put forward the optimization plan of environmental cost in three stages, namely, before, during and after the event. Finally, using the method of combining theory with practice, put forward that enterprises should build an environmental cost control system and supporting measures for the return of manure to farmland.

Keywords: Environmental Cost; Cost Control; Pig Scale Breeding

#### 1. INTRODUCTION

Livestock and poultry breeding industry is a traditional pillar industry in China, which plays an important role in promoting farmers' income and improving China's economic development level. With the continuous development of market economy, China's livestock and poultry breeding industry is in the critical period of continuous adjustment and optimization of industrial structure, and the development of pig scale breeding has become the main direction of China's livestock and poultry breeding industry. However, in the process of pig breeding, pig farmers often fall into difficulties due to the lack of relevant management experience and correct theoretical guidance.

Considering that New Hope Group is a leading enterprise in pig large-scale breeding and a representative enterprise that urgently needs to reverse the situation of "high cost and low benefit" at this stage, this paper takes the Group as the research object, analyzes the problems and factors that need to be focused on in the process of large-scale breeding management and cost control through in-depth analysis of the current situation of pig breeding management and cost control of the Group Environmental cost control refers to the analysis of environmental cost information based on the accounting of environmental costs, and the control and optimization of factors affecting environmental costs by means of environmental cost control, so as to achieve the effect of reducing environmental costs and improving social benefits of enterprises.

Controlling the environmental costs of enterprises not only improves the economic benefits of enterprises, promotes the sustainable development of enterprises, but also improves the overall social benefits and improves the environment. The main purpose of pig farmers to raise pigs on a large scale is to obtain the maximum profit as much as possible. Therefore, finding the way to obtain the maximum profit is the first consideration of the farmers. On the basis of the constant level of pig breeding and market demand, the selling time of pigs is the biggest factor affecting the profit of pigs. With the growth of pigs, the feed consumption is also rising, and the unit

weight of pigs is rising, but the sales price will not increase with the increase of weight.

Pig breeding industry chain is shown below (Inage from public resources).

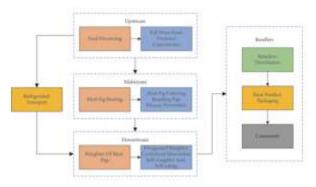


Table. 1 Pig breeding industry chain.

#### 2. THE PROPOSED METHODOLOGY

## 2.1 Estimation of environmental cost of large-scale pig breeding

The increase in management costs may be closely related to the development goals of New Hope Group. At present, there is a large gap between the actual sales volume of the Group and the target value. In order to improve the level of self-produced sales, the level of management investment has been increased. However, in recent years, the market situation of the pig breeding industry is relatively severe. New Hope Group urgently needs to change its management mode and reduce management costs. The increase in financial expenses may be related to the new "company+family farm" model implemented by the Group. Under the new model, the company's investment proportion increases, and the capital operation leads to an increase in financial expenses. The limited land consumption will affect the way and utilization rate of manure resources:

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- (1) Excrement recycling is the most effective way to save environmental costs, but it requires a certain amount of land. At present, there is not enough land to absorb is a problem that restricts the development of excrement recycling and animal husbandry. Under the condition that the land is also very expensive, if the supporting land for self-cultivation is not enough, it will affect the way and utilization rate of fecal waste and increase the environmental cost.
- (2) The production of pork generally goes through a long production cycle. It takes half a year or even a year from piglets to live pigs. The production of pork is often affected by breeding costs, inflation, supply-demand relationship and epidemic factors.

Due to the large-scale breeding of pigs in China and the emergence of market information asymmetry, the fluctuation of pork prices in the market and the enthusiasm of pig farmers will be seriously affected. The project construction mode reduces the operating efficiency. Based on the "settlement" management mode, New Hope Group has adopted the "trilateral engineering method", that is, while developing, while building, and while entering pigs. However, in the large-scale promotion, the simultaneous implementation of the three stages has not only affected the construction progress, but also caused interference to the growth environment of pigs. The outstanding performance is that the success rate of breeding and breeding in the breeding and breeding farm has declined during the transformation of the fattening farm project The biological treatment technology of anaerobic-aerobic combined treatment is adopted for the integrated agricultural utilization of liquid manure, water and fertilizer.

### 2.2 Safeguard measures for environmental cost control of aquaculture enterprises

Single anaerobic or aerobic treatment can not achieve the standard discharge of pig breeding sewage, which greatly increases the environmental costs of sewage treatment. The anaerobic-aerobic combined treatment method not only overcomes the disadvantages of large energy consumption and large floor area of aerobic treatment, but also overcomes the defects of anaerobic treatment that can not meet the requirements. It has the advantages of low investment, low operating cost, good purification effect, high comprehensive energy and environmental benefits, and is particularly suitable for the treatment of sewage from standardized livestock and poultry farms. On the one hand, it can effectively control the pollution, on the other hand, it can improve the utilization rate of livestock and poultry breeding waste.

To improve the level of breeding plays a certain role in controlling the environmental costs of enterprises. Since the development of market economy, the fluctuation of pork price in China has obvious cyclical characteristics, which is manifested in the change trend of "low in the middle and high in both ends". When the pork price rises, the supply of live pigs will increase, resulting in the rapid decline of pork price; When the price of pork falls, the supply of live pigs decreases, resulting in a rapid rise in the price of pork.

The utilization rate of fattening farms is low, and the proportion of live pigs is high. Due to the group's early pursuit of scale expansion, the development and construction progress of the pig farm site is too fast. In addition, due to factors such as the low breeding and fertility rate of the group, the pig farm construction and production capacity do not match, and the new fattening farms are not fully put into use, resulting in an

increase in the input-output ratio. At the same time, at present, more than half of the group's pigs are raised by large-scale farmers, and the average cost of raising pigs is significantly higher than the cost of self-raising pigs, which has increased the unit operating cost to a certain extent.

#### 3. CONCLUSION

The breeding enterprises should negotiate with the surrounding village committees and towns to obtain supporting land, coordinate the development of the company's pig breeding industry with the development of the local planting industry, and promote the integration of breeding and breeding from a regional perspective, which not only solves the problem of the company's pig manure, improves the utilization rate of manure resources, and reduces the impact of uncertainty factors on the generation of farmers. Third, reasonably plan the space of pig farm. For the space that is not fully utilized, it is possible to consider planting additives with higher cost in feed matching or crops that can help purify the air, so as to reduce the cost of purchased feed additives while regulating the environment of the pig farm.

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