

# Research on Challenges and Countermeasures of Critical Food Enterprises

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## Abstract

Redistribution of expiration date food can break the information gap, so that users can buy the goods to their liking, and effectively realize the real value of each piece of goods. This paper deeply analyzes the background of the development of adventitious food enterprises, systematically combs through the many challenges they face, and puts forward targeted coping strategies, with a view to providing constructive references for the development of the adventitious food industry.

## Keywords

Critical foods; food safety; quality control.

## 1. Background of the development of critical food enterprises

The problem of food waste has become more and more prominent in recent years. Economic development and the improvement of living standards have led to an increase in food consumption, which is followed by a serious food waste phenomenon. Globally, about one-third of food is wasted every year, and the situation in China is not optimistic. Food waste not only wastes resources, but also increases the burden on the environment and affects sustainable development, so reducing waste and improving resource utilization have attracted much attention. And as the public's concern for food safety and health increases, consumers realize that expired food can be safely consumed within its shelf life and is cost-effective. This change in perception creates development opportunities for the expired food market. At the same time, consumers' awareness of environmental protection and sustainable consumption has increased, prompting more people to choose expired food to reduce resource waste. Social development and changes in consumer attitudes have led to rising demand for expired food, with young consumers particularly favoring the low price and high cost-effectiveness of expired food. The rise of e-commerce platforms has provided new sales channels, and the combination of online and offline modes has made it easier for expired food to enter the market. The state also attaches great importance to food safety and reducing food waste, such as the implementation of the Anti-Food Waste Law of the People's Republic of China, which regulates and penalizes food waste and encourages enterprises to reduce waste.

The expiration date food enterprise is a response to the development of market demand, as well as a positive response to social, environmental and economic issues. By establishing trading platforms to promote the circulation and consumption of expired food, expired food enterprises are able to achieve the dual goals of environmental protection and economic benefits.

## 2. Challenges to the development of critical food enterprises

### 2.1. Food safety issues

Critical food, although within the shelf life, but close to the shelf life limit, there is a high risk of quality and safety. This risk mainly stems from the fact that the quality of the food may change when it is close to its shelf life, such as loss of nutrients, deterioration of taste, and even possible microbial contamination. If not properly managed, these potential problems may lead to food

safety accidents, which will not only jeopardize the health of consumers, but also seriously damage the reputation and market credibility of the enterprise. Therefore, the storage and sale of expired food must strictly comply with relevant food safety regulations to ensure consumer health.

## **2.2. Logistics and distribution problems**

As a special commodity, expired food, its logistics and distribution links there are many risks, these risks can not be effectively managed and controlled, will directly affect the quality and safety of food, and thus increase the loss and damage the reputation of enterprises.

Improper temperature and humidity control: expiration date food is often on the storage and transportation of temperature and humidity conditions have strict requirements. Improper temperature and humidity environment may lead to accelerated deterioration of food, such as dairy products are easy to rot at high temperatures, while certain dry goods may become moldy in a humid environment. Transportation delays: The transportation process may be delayed due to unforeseen factors such as weather changes, traffic congestion and vehicle breakdowns. For expiration date foods, time delays mean that the food is closer to its shelf life, increasing the difficulty of selling and the risk of wastage. Packaging breakage: In the process of logistics and distribution, the packaging of food may be broken due to extrusion, collision and other reasons, leading to direct exposure of food to the external environment, which is susceptible to contamination and deterioration.

## **2.3. Policy and regulatory risks**

The sale of expired food is indeed subject to strict national and local food safety regulations, which are designed to protect consumer rights and ensure food safety while preventing food waste. However, changes in regulations as well as differences between different regions pose significant regulatory compliance and policy risks to the advent food sales industry.

First, policy changes may directly affect the sale of foods on their expiration dates. For example, the government may introduce new regulations that restrict when, where, or how adventitious foods may be sold. Such restrictions may include shortening the sales period of foods with expiration dates, restricting sales to specific areas or types of stores, etc. These policy changes may result in the need for companies to quickly adjust their sales strategies, or even abandon their original marketing plans in some cases. Second, regulations on the sale of expired food products may vary from region to region, which imposes additional compliance costs on companies. In a country as vast as China, with a complex system of laws and regulations, different provinces, cities and even districts and counties may have their own unique food safety regulations. For an enterprise to conduct the business of selling expired food products nationwide, it must have an in-depth understanding of, and comply with, the regulatory requirements of each location, which increases the complexity and additional costs of management.

## **2.4. Inventory backlog problem**

Due to its short shelf life, the inventory management of expired food is more complicated and critical than that of ordinary food. This particularity makes it very easy to generate new backlogs of inventory during the sales process of foods with expiration dates, which brings a series of risks and challenges.

First of all, inventory backlog will directly lead to economic losses. Once the backlog of expired food is too large and exceeds its shelf life, these foods can no longer be sold and can only be disposed of as waste. This not only wastes valuable food resources, but also directly leads to economic losses. Secondly, inventory backlog will affect the cash flow and operational efficiency of the enterprise. The backlogged inventory will take up the storage space and capital of the enterprise, leading to cash flow constraints. At the same time, in order to deal with this

backlogged inventory, enterprises may need to invest additional resources and efforts, such as promotional activities, price reduction sales, etc., which will further increase the operating costs of the enterprise and reduce operational efficiency. Furthermore, inventory backlogs may also damage a company's brand image and consumer trust. If a company has frequent problems with backlogs of expired food products, consumers may become skeptical of the company's inventory management capabilities and food quality, which may in turn affect their purchasing decisions. In the long run, this will adversely affect a company's brand image and market competitiveness.

### **3. Countermeasures Analysis for the Development of Critical Food Enterprises**

#### **3.1. Market Expansion and Cooperation**

Establish stable cooperative relationship with large supermarkets and wholesalers to purchase expired food regularly to ensure the stability and diversity of supply. In the cooperation with large supermarkets, signing a long-term cooperation agreement is the foundation. The agreement should set out in detail the rights and obligations of both parties in respect of the supply of expired foodstuffs, for example, the supermarkets should provide a list of expired foodstuffs in accordance with a fixed cycle, including detailed information on the types, quantities and shelf-life of the foodstuffs, and the Company should purchase the foodstuffs in accordance with the agreed price and time. In addition, the company should establish a data-sharing mechanism with the supermarket to predict the amount of expired food in advance by analyzing the supermarket's sales data, customers' purchasing behavior and other information, so as to formulate a reasonable procurement plan.

For wholesalers, expiration date food companies can establish a supplier evaluation system. Evaluate wholesalers according to their supply capacity, reputation, food quality and other dimensions, and select high-quality wholesalers to establish long-term cooperative relationships. At the same time, in order to incentivize wholesalers to supply steadily, the company can set up an incentive mechanism, such as giving certain price concessions or additional cooperation projects based on the quantity and quality of the supplied adventitious food. In addition, through the establishment of an inventory management system with wholesalers, real-time monitoring of the inventory level of expired foodstuffs to ensure a stable supply of goods.

#### **3.2. Quality control and safety management**

Adventitious food companies should be well aware that quality is the lifeline of the enterprise, especially in the operation of adventitious food, quality control is more critical. The company should establish a set of comprehensive quality control system, covering the whole process from the source of procurement to the sales terminal of adventitious food. In the purchasing process, the company should set up strict access standards for suppliers, so that only those suppliers who meet the food safety standards and the company's quality requirements are qualified to cooperate with the company. For each batch of procurement of expired food products, the company shall require the suppliers to provide detailed product information, including production batch, shelf life, quality inspection report, etc. In terms of quality inspection, the company shall set up a specialized quality inspection department with advanced inspection equipment and professional inspectors.

At the same time, critical food enterprises should recruit people with professional food storage knowledge and experience as food custodians. They will have specialized knowledge in food science, warehouse management, etc. and be familiar with the storage conditions and requirements of different types of food. The main duties of food custodians include rationalizing

the storage location and storage method of food according to the type of food, shelf life and other factors. For example, for foods requiring low-temperature preservation, ensure that they are stored in suitable refrigerating equipment; for foods that are susceptible to moisture, take moisture-proof measures for storage.

### 3.3. Sales channel construction

Combine the sales models of online platforms (e.g. websites, mobile applications) and offline physical stores to broaden sales channels and cover a wider range of consumer groups. Advent food companies should recognize the great potential of online sales platforms in the Internet era. The company can invest resources to build a professional website and mobile application to create a convenient and efficient sales platform for expired food. The website and mobile application will have rich functions, including product display, online ordering, order tracking, customer evaluation and so on. In terms of product display, the detailed information of the expired food can be displayed in a clear and intuitive way, such as the name, brand, specification, shelf life, price, and preferential activities of the food, etc., accompanied by beautiful pictures and detailed product descriptions, so that consumers can have a comprehensive understanding of the products. In terms of the operation of the online platform, the company should focus on user experience. By optimizing the interface design of the website and mobile application and improving the page loading speed, the user's shopping experience can be enhanced.

Offline stores are an important part of the sales channels of critical food companies. The Company shall rationalize the layout of offline physical stores based on market demand and population distribution. In terms of site selection, priority will be given to commercial areas with higher foot traffic and higher consumption potential, such as shopping centers and community shopping streets. The store design of the physical stores will focus on creating a warm and comfortable shopping environment, while highlighting the features and advantages of the expired food. For example, expired food will be displayed through creative displays and specialized tasting areas will be set up to enable consumers to personally taste the taste and quality of expired food.

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