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HOW TO FORM THE CONNECTION MECHANISM BETWEEN FRUIT FARMERS AND FRUIT RETAILERS: DESIGN OF AN E-COMMERCE PLATFORM TO OPTIMIZE UPSTREAM VALUE CHAIN

Abstract: Starting in April of 2019, China's domestic fruit prices have generally increased significantly, which has imposed a certain burden on consumers. In recent years, the development of various e-commerce platforms has brought fresh vitality to the Chinese economy, especially the fresh food industry. Although these fresh food e-commerce platforms provide consumers with certain convenience, they just integrate resources on the spot and cannot fundamentally change the imbalance of the supply and demand structure of the fruit market. To address this issue, we have created a platform that can directly connect fruit growers and retailers via investigating the main stakeholders of the fruit fresh industry chain, using big data, cloud computing, intelligent monitoring and modern cold chain technology. Therefore, market information will be transferred smoothly and fruit prices will be stable. Furthermore, in response to the country's "poverty alleviation call", our platform helps peasantry increase their income by providing fruit price predictions and planting guidance to them. With this platform, production and marketing can be effectively connected, the upstream value chain of fresh fruit industry can be also optimized, so that fruit producers and consumers can better enjoy the opportunities brought by the e-commerce economic era.

Key words: Fresh fruit e-commerce, fruit growers and retailers, structure balance of fruit supply and demand, upstream value chain of fruit industry.

Language: English

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Introduction

China is the largest country of fruit production and one of the biggest consumption country in the world. As a supplement of energy and nutrition, fruit plays a very important role in people's life. The trend of fruit price is also a hot issue concerned by the masses. In recent years, some fruit prices has

fluctuated frequently, which not only disturbed people's living consumption, but also impacted industry production.

For example, in 2019, China's fruit supply is less than demand, and prices have continued to soar, which has greatly affected residents' consumption and eating

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habits. There are mainly three reasons for the fruit supply and price fluctuations in the first half of 2019.

The first reason is the lag of information. The fruit harvest was great last year, and the price was too cheap, so the fruit farmers chose to retaliate to reduce production in 2019, which reduced a large amount of fruit supply from the source. Under the economic law in which the market plays a decisive role, there are also lagging defects. It can be speculated that the market situation of good fruit market in 2017. Thus, the desire for profit would drive fruit farmers to expand the scope of fruit cultivation in the next year. In this way, excessive fruit production will lead to the continued decline in fruit prices. This year's market information affects the scope of the planting next year, but the real demand in the market has quietly changed over time.

The second reason is the asymmetry of market information and the layers of exploitation in the middle. For example, farmers who grow fruits in various regions have achieved a bumper harvest, but they cannot sell them. All kinds of rotten news are constantly appearing, and consumers think that the supply and demand of fruits are small and expensive. In fact, due to the cost of fruit transportation and storage, and the profits of various middlemen, the price of fruit has risen a lot, and the fruit that consumers buy is not cheap. The fruits of farmers are too much to sell, but real consumers cannot buy them and spend a lot of money. This asymmetry of information has seriously affected the balance of supply and demand of fruits, resulting in the waste of resources and not conducive to the sustainable development of the economy (Hu &Huo, 2014).

The third reason is the impact of natural disasters. Agriculture is the most directly affected by weather and natural disasters in all industries, and has the characteristics of vulnerability and

decentralization. In 2019, the main consumer fruit categories such as apples and pears have been reduced in production due to climate factors, and prices have risen significantly. Several major apple producing areas such as Yantai in Shandong, Luochuan in Shaanxi, Yunnan and other places suffered from freezing damage, hail and other disasters, resulting in a 60% reduction in apple production. Pears mainly come from production areas such as Hebei and Korla in Xinjiang. They also experienced a cold spring in April. The climate caused a 70% reduction in production.

After the above analysis and discussion, in addition to the uncontrollable natural factors such as weather, the main reasons for high fruit prices are the lag and asymmetry of market information, as well as transportation and labor costs. At present, the fruit industry chain starts from the planting stage to the circulation stage, with the fruit farmers as the circulation starting point, involving the fruit farmers, the first-class wholesalers, the second-class wholesalers, retailers and other multi hands (Yang, et al.,2020).The more fruits are handled in the circulation stage, the higher the price plus achievement, so the final fruit in the hands of consumers has changed, the price has risen, and the price is high. Because there are too many intermediate links, the media wholesalers acquire the fruit farmers' products to gain profits through constant bargaining, and finally pass on the costs and labor costs in the transportation process to the consumers through layer by layer pricing. If the intermediate circulation link in the fruit industry chain can be further simplified, then the transportation and labor costs can be further reduced, and the price markup will be further reduced. Finally, the fruit that reaches the consumer end can achieve the goal of eating fruits fresh as well as cheap.

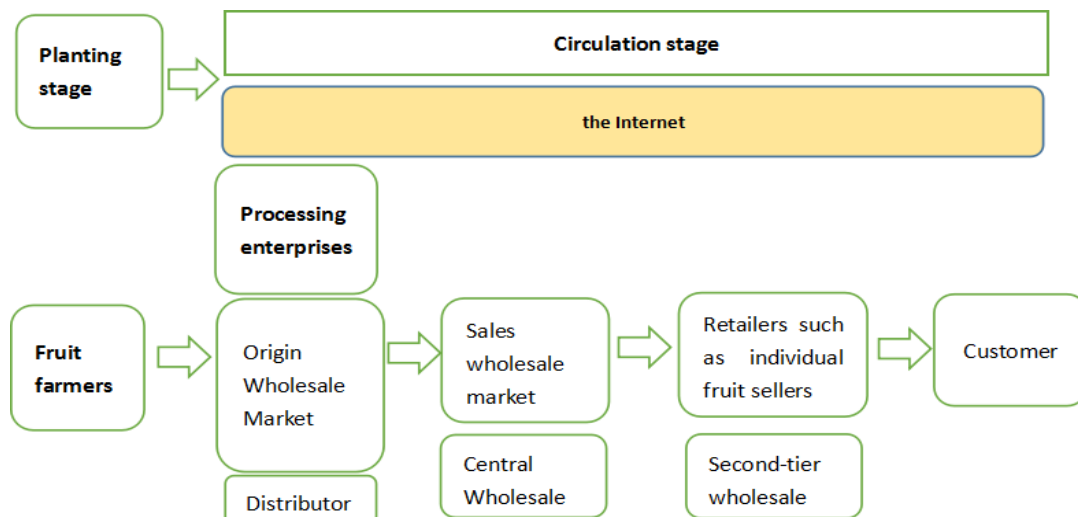


Figure 1: Fruit industry chain

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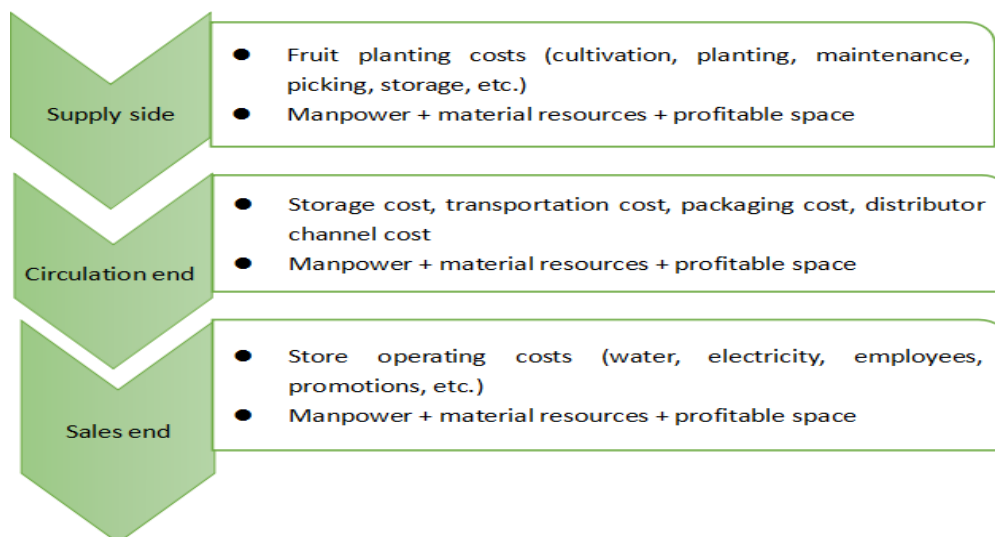


Figure 2: Factors affecting fruit prices

With the advent of the Internet economy era, China's fresh food e-commerce is showing an explosive situation, and market competition is intensifying. A large number of agricultural products have begun to enter the ranks of e-commerce from traditional channels, so fresh e-commerce is also known as the last blue ocean of e-commerce. However, compared with foreign countries, the development of fresh food e-commerce in China is still in its infancy, and its maturity is relatively low. Its logistics and distribution links are even more critical to the development of fresh food e-commerce in China.

Foreign fresh e-commerce companies, especially the United States, Britain and Japan, have a long history of development and are already at a mature stage. There are five main types of fresh e-commerce models in the three countries: the United States, the United Kingdom, and Japan:

1. B2C mode: It is an e-commerce model for enterprises facing consumers. Enterprises provide consumers with a new type of shopping environment through the Internet—an online store, where consumers shop online and pay online.

AmazonFresh is a company engaged in fresh food delivery services under the American Amazon. Because fresh food requires low-temperature storage, AmazonFresh has established a warehouse with refrigeration equipment in the Seattle area. With the help of cloud computing and an efficient logistics distribution system, it can realize the "same day delivery" or "next day delivery" service.

2. O2O mode: refers to a kind of consumption in the field of life. A new business model for consumers to consume through the combination of online (online) and physical store (offline). Simply put, O2O is a new business model of virtual and real interaction in the field of life consumption (Wang, et al., 2019).

The most typical O2O model abroad is Japan's Cybird Fresh E-commerce Company. Its company integrates the resources of both producers (farmers) and consumers to establish a consumer trading platform that enables farmers to sell goods through this platform. Consumers make purchases through this platform. The biggest advantage of this business model is that it reduces intermediate circulation links and gives products a greater price advantage.

3. C2B mode: from consumers to enterprises, is a new business model in the era of Internet economy. This model changed the relationship between the original producers (enterprises and institutions) and consumers. First, consumers demanded, and then production enterprises organized production according to demand.

PeaPod is one of the first companies in the United States to use e-commerce to sell fresh food. The main supplier of this company is a supermarket, collecting orders between its partner supermarkets, flexible purchases between supermarkets and supermarkets, packaging and delivery of items. PeaPod Fresh mainly develops websites for distribution in the logistics system, and does not store goods by itself. This company focuses its work on the commercial processing of orders and the delivery of goods to form an effective network of external buyers.

4. B2C + O2O mode

Ocado is a British B2C website that mainly sells fresh food, food and toys. In terms of fresh food sales, Ocado has two modes of operation, one is B2C mode; the other is O2O mode (Yangyan S, et al., 2018).

Japan Life Synergy Group (abbreviated as Health Association) is a special economic organization established by consumers to invest in shares to serve members and is an important sales channel for fresh agricultural products in Japan. Its products are mainly purchased directly from the wholesale market and the place of origin, and the sales

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methods mainly include store sales and home delivery sales. The Health Association has a 50-year history of home delivery. Consumers order by phone or online, which greatly saves costs and time.

5.C2C + O2O mode

Farmigo is an online group buying platform that connects consumers and agricultural products in the United States. It does not sell goods itself, but only acts as an intermediary between consumers and farms. Fannigo's food community is established by the sponsor applying to the website. The sponsor needs to invite at least 20 friends or neighbors to join the food community. The food demand information is published every two weeks. 10% of the community's sales and food discounts will be used as Promoter's reward (Shen &Sun, 2016).

Compared with more developed countries such as the United States, the United Kingdom and Japan, China's fresh food e-commerce model and platform are less mature. At present, most of the fresh food e-commerce in China is operated in B2C or O2O mode, and the C2B model is especially popular in the United States. On the one hand, this model with consumer demand as the core can improve consumer satisfaction; on the other hand, consumers first place orders for e-commerce before purchasing and distribution can effectively reduce the cost of warehousing and storage, and reduce the loss of fresh food rate. This kind of efficient and innovative C2B model of fresh food e-commerce in China is indeed very few. The next stage of development should learn from such advanced experience and combine it with the actual situation in China's market.

Different from the stereotyped B2C and O2O models of existing domestic fresh food platforms in China, and from the five models of foreign developed countries, our platform has innovatively developed the C2B model, but it is also different from this model (Xu, 2019). The original C2B model in the United States shows that the operation mode is mainly for enterprises to integrate all orders of cooperative supermarkets and distribute them to them; all cooperative supermarkets here are equivalent to "consumers", and the enterprise acts as the first delivery and consignor, but its The supplier chose another supermarket; so in fact this is a supermarket-to-supermarket resource flow, without really tapping the upstream main body and value, without directly connecting the producer and the demander, and the intermediate link still exists. However, this model allows consumers, who have a demand for fruit, including individual subjects, retailers, and supermarkets, to accurately communicate the true demand to the supply side, so that supply and demand can reach a certain balance, reduce waste of resources, and improve the efficiency of fresh food supply (Yang, 2019).

The innovation of our platform lies in putting the retail end on the position of consumers, using the fruit

farmers who produce fruits as the upstream main body of our platform, directly connecting the real producers and consumers, reducing the intermediate links, and further digging and optimizing the upstream circulation value. And give the retail end full autonomy to choose which fruit producer to become its own supplier, buy directly on the platform, through platform data construction, 5G communication technology application, AR, intelligent remote sensing and other detection and control technologies, Retailers can visually see the quality and cultivation of fruits, which not only guarantees the quality of the source of goods, but also saves time for retailers to purchase; In addition, due to the main body of our platform is innovative, it reduces many intermediate links, making retail End-to-end large-volume orders can also obtain price concessions on a larger scale (Tianhua Z, et al., 2018). In addition, for producers, that is, fruit growers, our platform has also innovatively developed the function of predicting fruit price trends. At the same time, it will also provide certain scientific planting technical guidance for growers stationed on the platform and provide services such as quality testing to help them get rid of Lag behind the unfavorable state of the market, and arrange the planting scale reasonably so that the production and marketing can be connected. For poor fruit farmers, it can also play a role in poverty alleviation.

II. Materials

2.1 Definition and purpose of the "fruit recall" Internet platform connecting fruit farmers and fruit retailers

Our project is an innovative Internet fresh food e-commerce platform, which is committed to making fruit retailers more convenient to purchase high-quality fruit sources, and farmers can expand sales through our platform. We will provide them with a strictly controlled Internet fresh platform. The growth conditions and processes of fruits can be visualized. Retailers can safely choose the fruits they need to sell on our platform. Multi-level quality is optional, providing a variety of s Choice. At the same time, bypassing the middleman's sales model can also allow retailers to reap the most cost-effective.

Our project also analyzes the retailer's purchase data, and at the same time combines the local natural data and the fruit market data published on the Internet to make fruit market predictions and price trend predictions, and sends these information back to the farmers we need to help, so that The planting behavior has greater rationality and professionalism. The platform will also establish a dedicated cooperative relationship with the poverty-stricken farmers to provide a good platform for farmers to get rid of poverty and become rich.

Through the construction of the platform, the fruit logistics industry chain can be further integrated,

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thereby optimizing the upstream value chain and making the intermediate links continuously cut, which is more in line with the economic benefits of the "Internet era" and conforms to sustainable development (Jie&Xin, 2015). Effectively connect and serve fruit farmers (producers) and retailers (sellers), innovatively select the special influence subjects of the fruit production distribution chain, provide them with a trading platform, integrate the needs of both parties, so that buyers can buy The sellers can sell their fruits at a good price for good and cheap products, which is marketable and solves the problem of unbalanced supply and demand of fruits.

2.2 Market feasibility analysis

As can be seen from Figure 2.2.1, China, as the world's largest fruit producer and consumer country, has grown rapidly in the area of fruit cultivation since the past decade. In 2010, the planting scale was only 10681.02 thousand hectares. In just nine years, the planting scale has reached A total of 11,874.87

thousand hectares. From 2010 to 2015, the planting area of orchards has grown steadily and gradually, and there has been a downward trend after 2015, and it has shown a strong growth trend since 2017. It can be speculated that the scale of fruit cultivation in the early stage will gradually increase, and the market will have too much supply and demand, and the price will be reduced. However, producer fruit farmers cannot keep abreast of market information changes, lagging behind the market response, making the product surplus and affecting their income, so this has also led to fruit farmers The reason for the drastic reduction of planting scale. Since the output of fruit depends on market demand, it can also be seen from this that China's demand for fruit consumption is also very large. In addition, it can also be concluded that the fruit market potential is still huge. To further develop this market, it is very urgent to develop new sales models and platforms.

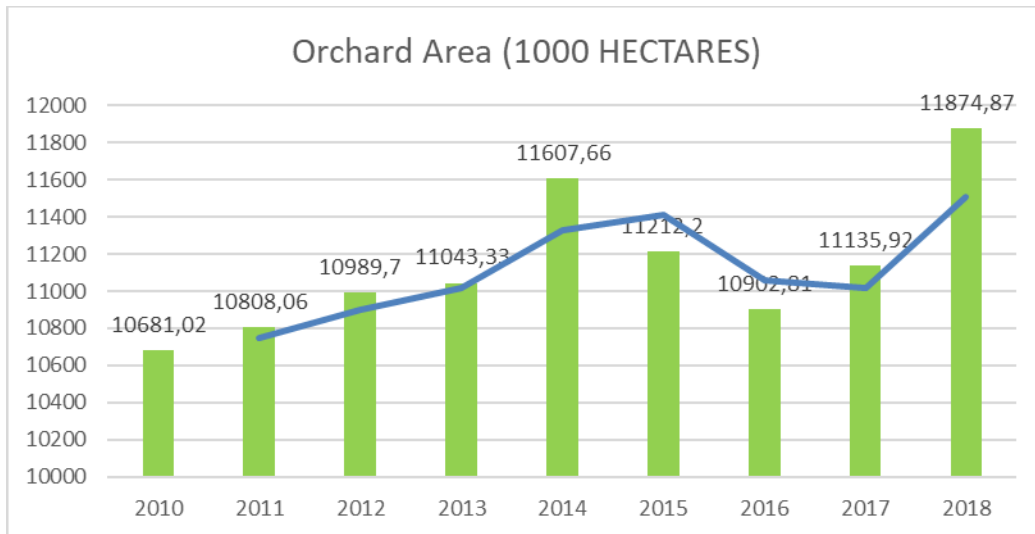


Figure 3: 2010-2018 growth of China's orchard planting area

Figure 3 shows that the price index of fruit consumption in China is also developing in an overall upward trend, which not only shows the development of China's economy, the improvement of China's consumption level and purchasing power, and the continuous improvement of living and consumption standards , And the demand for fruit is also increasing. Because the state of supply and demand affects the price of fruit, and the higher the demand, the higher the price, so China's fresh fruit market still has a very large market potential. Just like the blue ocean in the field of e-commerce, it has huge development

potential and unlimited possibilities. In addition, the fluctuation of China's fruit consumer price index also reflects the problem of the docking of fruit production and sales structure. For example, too many intermediate links in the circulation process lead to an ineffective increase in fruit prices, and this price is ultimately transferred to consumers; or the fruit market reacts, and the layers of links make it difficult to quickly convey the reaction information to fruit growers , So that growers make wrong decisions that lag behind real market demands.

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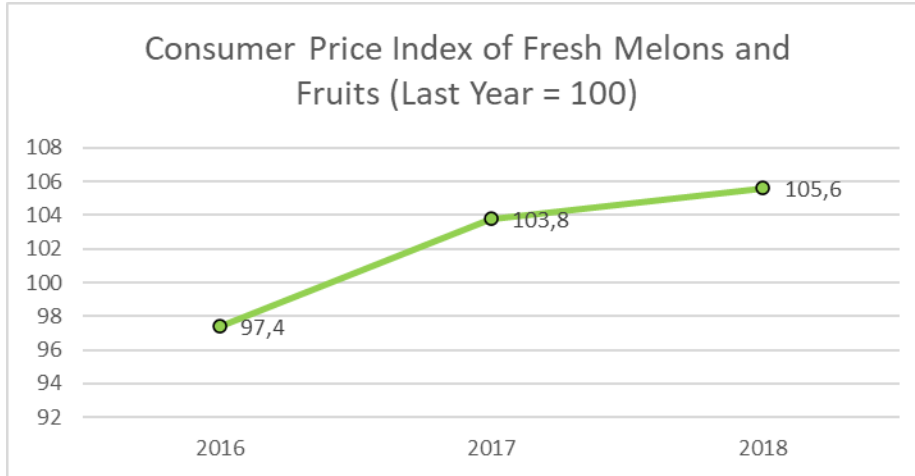


Figure 4: 2016-2018 Fresh Fruit Consumer Index

It can be seen from Figure 4 that the market share of agricultural product e-commerce platforms is rising rapidly, that is, agricultural product e-commerce platforms have great prospects in the future development field. Due to the huge potential of the fresh market, fresh e-commerce companies have launched new services to seize the market. Citizens can easily place orders on the mobile phone and wait for fresh fruit dishes at home (Bo, et al., 2018). For example, "Everyone is very busy at work and has no time to go to the market to buy fresh fruits and vegetables. It is very convenient to buy fruits and

vegetables online. You can get fresh when you come home from work." Cao Lei, director of the research center, said that fresh food is loved by young consumers, and with the increase in the population of China, the fresh food e-commerce market has great potential in the future. Judging from the current fresh food market, the local vegetable market is highly time-effective, while the supermarket coverage is not dense enough, and the pace of life in first- and second-tier cities is accelerating. Some residents, especially office workers, have greater user demand in the fresh food field.

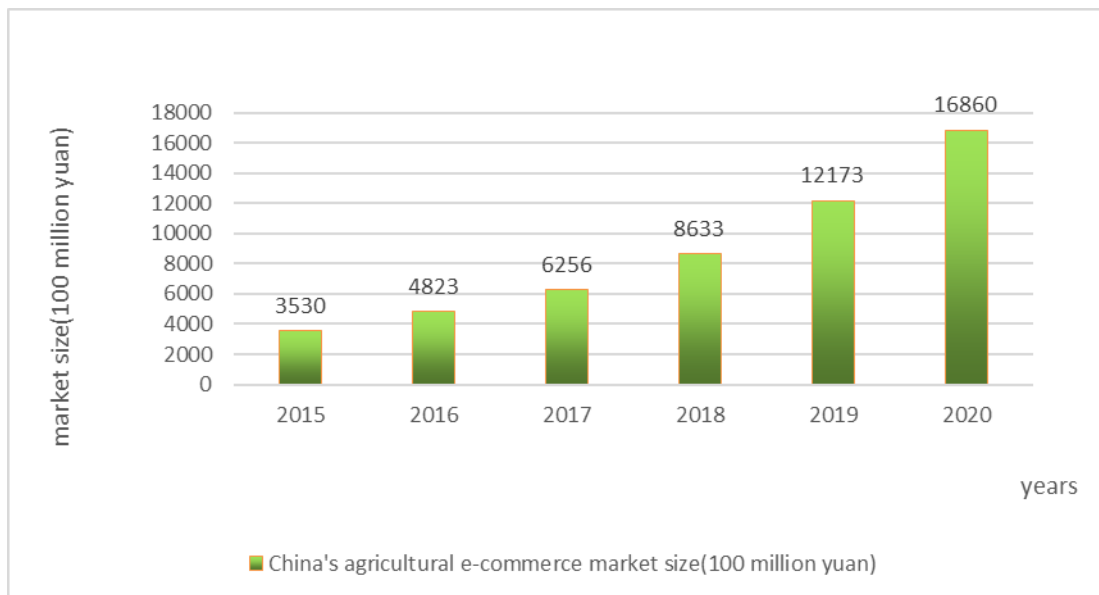


Figure 5: China's agricultural product e-commerce market share

In addition, China's various fruit fresh e-commerce platforms operate fruit delivery business, which makes us dizzy. Such as "JD Daojia": through leveraging social resources to form the prototype of China's "social e-commerce", in the source of goods

and services, JD Daojia provides logistics and distribution by cooperating with large shopping malls, but JD Daojia provides logistics distribution (Gao,2020); Existing stores and resources cannot display the specific production environment,

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conditions, and quality testing of fruits, and are limited to connecting retailers and consumers.

These platforms are uniformly limited to connecting existing retail stores and consumers, and only integrating existing stores and resources, and then shipping to consumers, but this does not show the specific production environment, conditions, and quality testing of fruits. However, the Internet platform that provides retailers with high-quality and low-cost sources of fruit purchases and provides market analysis information for poor fruit farmers is still in a blank state. At the same time, there is no quick platform on the market that allows fruit retailers to directly visualize the quality and production conditions of the source fruit on the online platform, so that one-click can be used for bulk ordering.

Furthermore, the fruit price trend and prediction function have not yet appeared in the existing fresh fruit app on the market, so this is an innovative highlight of our development in response to the phenomenon of excessive increase in fruit prices. Most of the fresh mobile terminals lack the corresponding functions for the fruit farmers to refer to fruit prices and grasp the trend of fruit price fluctuations. Fruit farmers are in an asymmetric position for the analysis of fruit price changes and market analysis. At present, these timely and scientific production information cannot be used by fruit farmers. They are effectively obtained, so our project has the advantages and huge development opportunities to solve these problems.

In summary, our "Guo Yi" project has initially developed the three above functions to meet the needs of fruit farmers and retailers, filling the gaps in the industry and possessing great competitive advantages.

III. The design and implementation of "GUOYI" platform.

3.1.1 Function Big data analysis and cloud computing technology to predict the price trend of fruits

Big data analysis refers to the analysis of huge-scale data. Among them, big data mining (Data Mining) extracts hidden data from a large amount of incomplete, noisy, fuzzy, random data. Unknown, but potentially useful information and knowledge process. Big data mining is also the key to calculating and predicting fruit price trends on our platform. "Data mining" according to the information storage format, the objects used for mining are relational databases, object-oriented databases, data warehouses, text data sources, multimedia databases, spatial databases, temporal databases, heterogeneous databases and the Internet. Among them, the decision tree algorithm is an algorithm commonly used in predicting models. It classifies a large amount of data purposefully and finds some valuable and potential information from it. Its main advantages are simple description and fast classification speed, especially suitable for large-scale data processing.

Use network big data technology to mine all effective target information, such as daily fruit consumption and the number of regional fruit consumers, and then cloud computing and statistics on them. After the results come out, then integrate the information through the data network, and finally generate a real-time updated forecast chart of fruit price trends. As long as you enter the interface of our platform, you have the right to see this prediction section.

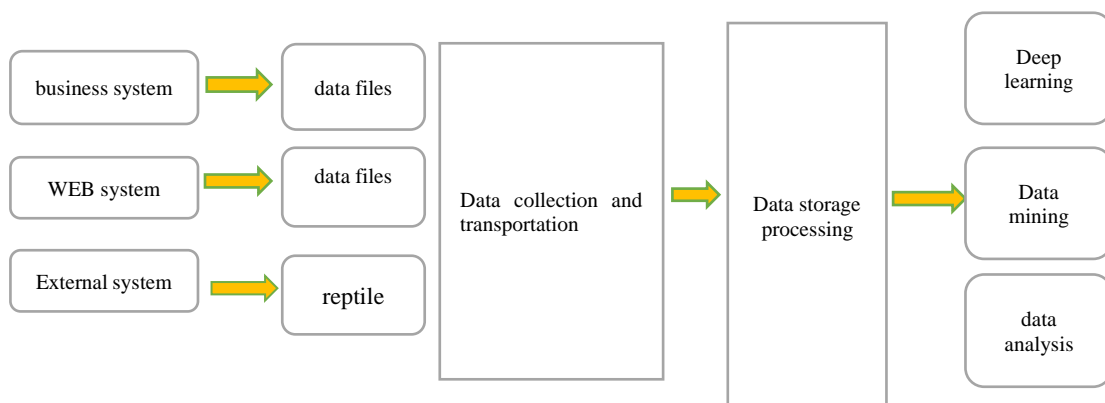


Figure: 6 Big data flow chart

3.1.2 Intelligent control and remote sensing detection system

The system is fully automated and the intelligent facility input allows fruit growers who work with us to receive scientific planting process detection and

technical guidance, which guarantees the quality of the fruit from the source and is also conducive to improving fruit growers. Scale benefit. Users can display the real-time monitoring data of the site through the area management, open the icon, query

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and download historical data according to the time period, display and analyze the data through the graph, bar chart or pie chart, establish a large database, and guide agricultural production. Users can supervise the agricultural internet of things monitoring platform in real time via PC section, wireless or online. Users can check the environmental parameters of their monitoring points anytime and anywhere through the mobile client.

The control of the intelligent greenhouse is generally composed of three parts: a signal acquisition

system, a central computer, and a control system. It systematically controls and detects soil temperature, humidity, carbon dioxide concentration, light, etc., and is equipped with an early warning device. In this way, real-time automatic adjustment and detection can be performed to create the best environment for plant growth, so that the environment in the greenhouse is close to the ideal value artificially conceived to meet the needs of greenhouse crop growth and development.

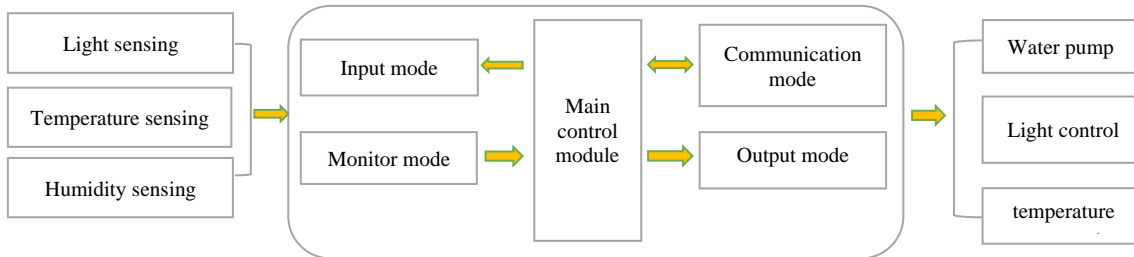


Figure: 7 Intelligent control and remote sensing detection system

3.1.3 Cold chain transportation technology

The technical system of cold chain transportation is mainly composed of the following parts: One is the mobile refrigeration system: mainly includes the mobile refrigeration system and products of the vehicle, the mobile refrigerator and auxiliary cold storage refrigeration measures such as dry ice and ice cubes; the second is the thermal insulation technology system, including Refrigerated containers, refrigerated compartments, insulated boxes, insulated bags, refrigerated boxes, and various types of insulation packaging technologies and sealing measures (Bing, et al., 2019); the third is the cold chain monitoring system, which is mainly used to monitor and manage the cold chain transportation process, including temperature sensors, RFID, GPS and software management system; also includes cold chain transportation information system technology,

such as: car networking technology, perception and information collection technology, full traceability technology, remote management and tracking and positioning technology; fourth, cold chain transportation equipment technology, mainly including cold chain transportation technology of low temperature transportation vehicles such as railway refrigerated trucks, refrigerated vehicles, aviation refrigerated containers, and refrigerated ships (Rakesh, et al., 2019).

Our platform has invested a lot in cold chain transportation, because the upgrade of cold chain equipment and cold storage technology can not only maintain the freshness and quality of fresh fruits, but also reduce the loss of fruits in the transportation road, which can further promote the increase of the third source of profit, making logistics flow smoother and more efficient.

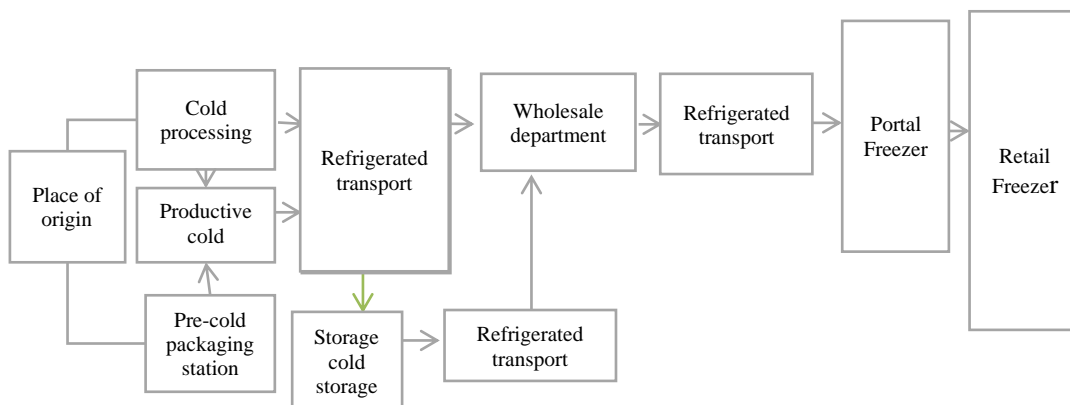


Figure: 8 Cold chain transportation technology

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3.2 The innovative advantage of GUOYI platform

(1) Establishing a bridge between fruit farmers and fruit retailers, allowing fruit commodities to be embedded in the Internet from the upstream of the value chain, can solve the problem of unbalanced supply and demand structure.

(2) Create a unique and innovative fresh online sales app. The client can visually see the field conditions of fruit production, and use modern AR and 4G / 5G technology to directly display the greenhouse environment and fertilizer use on the interface. , Fruit quality inspection data reports, etc., so that retailers can see the "afterlife and present life" of fruits, more assured and quick ordering in bulk, obtain high quality and cheap fruit sources, and consumers can also trace the source of fruit through our platform Place, production conditions and quality inspection.

(3) Fruit price trends and prediction functions have not yet appeared on the existing fresh fruit app on the market, so this is an innovative point of our development in response to the phenomenon of excessive increase in fruit prices, and it is also a highlight of our advantages. . Create a platform through the mobile Internet, use big data to provide fruit farmers with information on production areas, consumer preferences, predict the prices of various bulk fruits, and provide them with suggestions on fruit growing varieties in the coming year, which can help poverty-stricken farmers grow out of poverty.

(4) Through the construction of the platform, the fruit logistics industry chain can be further integrated, thereby optimizing the upstream value chain, so as to continuously increase the intermediate links of the fruit's circulation price, and continuously reduce it, so as to be more in line with the economic benefits of the "Internet era" and sustainability development .

(5) Choosing high-quality and healthy fruits has gradually become the mainstream trend of people's consumption, but today the mobile terminal lacks corresponding platform to meet people's needs for intuitively seeing the fruit production environment and conditions. Our platform can meet the new era under the demand of consumers for high-quality healthy fruits, and provide opportunities for self-selection, to meet consumers' requirements for a healthy life concept, eat more at ease (Woodruff, et al., 2018).

(6) At the same time, the retailer client lacks a direct and fast bulk ordering network platform that can not only see the quality of the fruit but also obtain the purchase price advantage. Our platform came into being in response to this demand, and has continuously built a mature and high-quality project to facilitate retailers to purchase wholesale without going out.

IV. Discussion

In the early stage of the platform construction, the company will choose Hefei, Anhui as a pilot, to radiate ongoing development to the surrounding areas. The main user groups connected are fruit growers, fruit retailers, community fruit stores, comprehensive commercial supermarkets, professional students , fresh supermarkets and even individual consumers who buy in bulk. For the bulk purchase of fruits, not only you can purchase and book high-quality, green fruits directly on the platform, but also you can directly see the field conditions of fruit production directly via using modern AR and 4G / 5G technology to show the greenhouse environment and fertilizer use Situation, fruit quality testing, etc., so that consumers can see the "before life and present life" of fruits, and buy more fresh and high-quality fruits that they are satisfied with more confidence. And the platform also has a preferential reward system . A point mall is set up in the platform section providing good customer service. Customers can obtain profit by using the platform or purchase related products to carry out points, provide point exchange benefits from time to time, and promote user activity. At the same time, after users provide high-quality and effective evaluations, user coupons can be presented to increase user stickiness. Establish an efficient suggestion feedback mechanism so that users can give us effective suggestions in a timely manner through email or Micro Blog and back-end feedback. We will provide timely feedback and make insufficient improvements.

In addition, for the main upstream party, our platform provides fruit market predictions and price trend predictions, and sends these information back to the farmers who need help, so that their planting behavior will be more reasonable and professional.

The platform will also establish a dedicated cooperative relationship with the poverty-stricken farmers to provide a good platform for them to get rid of poverty even become rich. Through the construction of the platform, the fruit logistics industry chain can be further integrated, thereby optimizing the upstream value chain and making the intermediate links continuously cut, which is more in line with the economic benefits of the "Internet era" and sustainable development.

However, compared with the existing agricultural e-commerce platforms on the market, the "Guoyi" platform is still hindered in terms of market share development and product value-added improvement. Because compared with the present existing fresh e-commerce platforms, such as "Tao Da Xian", "Hema Fresh" and other marketing models that have occupied a large market share, our platform and the model are relatively new and innovative. In addition, our platform advocates the spirit of the Internet era, which is to reduce unnecessary links in

Impact Factor:

ISRA (India)	= 4.971	SIS (USA)	= 0.912	ICV (Poland)	= 6.630
ISI (Dubai, UAE)	= 0.829	PIHHI (Russia)	= 0.126	PIF (India)	= 1.940
GIF (Australia)	= 0.564	ESJI (KZ)	= 8.716	IBI (India)	= 4.260
JIF	= 1.500	SJIF (Morocco)	= 5.667	OAJI (USA)	= 0.350

the middle as much as possible, so as to reduce waste of resources and improve overall efficiency.

In the early stage of the platform construction, our main goal is to build a bridge between fruit producers and retailers, and strive to optimize the upstream value chain of fruit circulation. In this way, the elimination of intermediate links can make the real price of fruit. For the platform, the added value of the process may not be effectively improved. The initial operation only depends on the station's entry and a small amount of fee for business. In addition, the arrival of the 5G era has also brought opportunities for 5G fresh e-commerce, but 5G communication technology has not yet established a large-scale base station, even the universality of use has not yet been universal.

The addition of 5G may not be able to take advantage of advanced advantages, and the cost is relatively high. When users watch the cultivation and fertilization process of fruit production areas on the platform, the screen frame rate may be lowered under the playback data network lower than 5G, making the picture blur.

Furthermore, the initial stage of platform construction requires large capital investment, and

financing is also subject to a certain obstacle, which is still a thorny issue in the development of the platform.

V. Conclusion

"Guo Yi" is a promising Internet fresh fruit e-commerce platform based on big data support, cloud computing and computer network front-end & back-end development technology. Creatively connecting farmers and retailers of fruit cultivation, paying attention to the needs of both of them, actually our platform builds a bridge between fruit producers and real consumers, so the supply and demand of fruit can be linked effectively. Additionally, the reduction of middle segments in the fruits' circulation will optimize the upstream value chain of fruit industry eventually.

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