

# ***Shanxi Yuncheng Red Fuji Apple E-commerce SWOT Analysis and Countermeasures Research***

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**Abstract:** With the rapid development of the Internet, the emergence of e-commerce has brought vitality to various fields. Under the guidance of e-commerce, agricultural products not only improve their added value, but also meet the needs of consumers. This article uses the SWOT analysis method to analyze in detail the strengths, weaknesses, opportunities, and threats of Shanxi Yuncheng Red Fuji Apple, and comprehensively analyzes the development status of rural e-commerce in the context of the Internet and rural revitalization. Therefore, this article proposes some countermeasures regarding the e-commerce of Shanxi Yuncheng Red Fuji Apple, which can help Red Fuji Apple better present itself to consumers.

## **1. Introduction**

Nowadays, with the rapid development of the Internet, the emergence of e-commerce has brought vitality to various fields. Under the guidance of e-commerce, agricultural products not only improve their added value, but also meet the needs of consumers. Nowadays, with the gradual decline of the rural internet industry in agricultural regions across the country and the further accelerated adjustment and deep penetration of the spatial pattern of the agricultural market in recent years, it is expected that China's rural e-commerce business will continue to develop more rapidly and efficiently in the future. Agricultural product market participants' exposure to agricultural e-commerce networks is gradually deepening, and agricultural product online retail sales are expected to gradually usher in a relatively stable and rapid growth. According to the authoritative data released by the Information Center of the Ministry of Commerce this year, the estimated total online retail sales of agricultural products across the country by 2022 may have reached billion yuan, or 401.7 billion yuan, which is nearly 1.5 times higher than the previous estimate of only growth in 2021. In this environment, the sales volume of Red Fuji Apple in Yuncheng, Shanxi Province has also experienced rapid growth. Zhang Pan (2021) first analyzed the operation methods of agricultural product e-commerce models at home and abroad, and then explored the elements of rural e-commerce development in the context of rural revitalization. He introduced the current rural e-commerce model and formulated corresponding countermeasures based on the current situation in Chongqing. Wang Xiaomei (2022) believes that the continuous and gradual development of rural mobile information network technology and its application industry can also gradually become a good platform for enterprises to help poor farmers get rid of poverty and become rich, achieve entrepreneurship and other new models.

Considering the actual problems in the current western region of China, it is found that there are still significant problems and specific difficulties and problems in the current rural e-commerce sector in China. For example, in view of the problems such as the lack of further development and improvement of rural e-commerce infrastructure networks and agricultural product e-commerce logistics systems for agricultural product sales in the western region, and the relatively shortage of rural e-commerce talents, the author proposes to provide some guidance and suggestions for the research on the development of China's agricultural product e-commerce platform and its construction and development strategies in response to the current difficulties faced by China. Anputui (2021) mentioned in the previous analysis article that it is now a major era in which China's traditional rural industry is undergoing accelerated revitalization and transformation, and industry is undergoing rapid economic transformation and development in coordination. The Apple industry of China's Yantai brand will inevitably face a huge opportunity, risk, and potential competitive pressure challenge under various new competitive situations in the industry. It utilized the SWOT analysis method to make another comprehensive, scientific and rigorous prediction of the competitive advantages, disadvantages, opportunities, risks, challenges, and various potential threats faced by the current Yantai brand Apple products in China. The following basic ideas and suggestions have been put forward to build a characteristic apple industry system with Chinese characteristics in Yantai: research and development and promotion of new apple technologies, attracting talents, reducing production costs, and increasing efficiency to promote varieties. Cultivate and strengthen the characteristic apple enterprise brand, innovate the characteristic apple industry system mechanism and characteristic product marketing, innovate the formation and mechanism of green apple research and development investment, explore and develop the green apple financial mechanism system, and other mature, detailed and practical specific policy recommendations. E-commerce is one of the important measures for poverty alleviation. Through a survey of Guizhou Province, Li Xingchi (2019) evaluated several e-commerce models based on economic data, summarized them, and analyzed the existing problems in e-commerce poverty alleviation from the perspectives of the government, leading enterprises, and farmers. Finally, he proposed policy recommendations to promote the development of e-commerce in Guizhou Province. Sun Chenxi (2022) also conducted a comprehensive analysis of the development of fruit industry in Shaanxi Province. The agricultural field covers a very wide range, and the number of employed farmers will naturally be the largest. A scientific application of market SWOT indicators has been conducted to analyze the outstanding advantages, disadvantages, opportunities, and development threats of the agricultural and fruit industry economic development model in Shaanxi Province, and a series of corresponding specific reform countermeasures and suggestions have been proposed for specific issues. Bonnie Canziani (2017) believes that regional brand equity also has an impact on different industries, and analyzes the impact on the wine industry as an example.

## **2. Shanxi Yuncheng Red Fuji Apple E-commerce SWOT Analysis**

### **2.1 Strength**

#### **2.1.1 Geographical Advantages**

Shanxi Province is located in the east of the Loess Plateau. The province has a total of over 10 million mu of land, including barren slopes, barren mountains, saline-alkali land, river beach land, and retired farmland. This land area can be used for water diversion irrigation and planting to develop a large number of various crops and fruit trees. Shanxi Province is also one of the major apple production provinces in China, and is located in the advantageous industrial belt of apples on the Northwest Loess Plateau. The climate suitable for apple cultivation is warm temperate continental

semi humid climate, and the region of Shanxi Province is also just as advantageous because it is located on the warm temperate loess plain landform. The monthly and monthly average temperature is only 13.8 °C, and although the annual daily and monthly average total natural sunshine time is 2366.2 hours, it is relatively rich in water resources, Most of the fresh water that can be consumed by humans can also be directly used as tap water. The Yellow River water can be converted into water apples, which can also be used for agricultural irrigation. Therefore, apples have become the first bulk fruit in Shanxi Province.

### 2.1.2 Policy Support

One of the main tasks in China's rural construction is to comprehensively launch and implement the strategy of comprehensive rural revitalization. With the comprehensive development of the overall revitalization of rural areas in China, new rural e-commerce models and rural live video e-commerce models have rapidly emerged, making new products from all walks of life have begun to sell rapidly, Shanxi Yuncheng Red Fuji Apple has also ushered in another golden era of new development, and has become the "e-commerce benchmark" of agricultural products in Shanxi Province. Currently, there are four main modes of agricultural product e-commerce in Shanxi Province: B2B mode, B2C mode, O2O mode, and C2C mode. As shown in Table 1.

Table 1: Main Modes of Agricultural Products E-commerce in Shanxi Province

Model characteristic	B2B model	B2C model	O2O model	C2C model
characteristic	reduce the inventory operation cost of the enterprise, and save the turnover time of the enterprise's product inventory for users	Directly obtain feedback, evaluation data, and service suggestions from end consumers regarding the quality of their products and services.	It can better grasp information and shorten the time for merchants and customers to understand.	It can enable consumers to more intuitively see the quality of the product.

(1) Apple's B2B distribution model: It actually refers to a new type of corporate marketing channel cooperative distribution model that is established between Apple corporate users and other domestic Internet enterprise customer groups, and directly exchanges and services related to enterprise product price information or direct prices on enterprise information or service product content through the Internet using mobile Internet devices, On the one hand, this cooperative sales channel model can quickly and effectively help enterprises reduce their inventory operating costs and save users' time in inventory turnover, and it can also effectively and quickly expand the terminal sales market for selling Apple phone products.

(2) Apple's B2C distribution model: It refers to an e-commerce retail transaction model that directly targets end consumers and sells certain product information and/or service products to target consumers. This retail model also requires a combination of the cash on delivery principle and online real-time payment technology used in the e-commerce transaction process. This e-commerce model can directly obtain feedback, evaluation data, and service suggestions from end consumers about the quality of their products and services.

(3) Apple's O2O distribution model: It is a combination of offline transactions and the Internet, which can better grasp information and shorten the time for merchants and customers to understand.

(4) Apple's C2C distribution model is a face-to-face consumer model, in which one takes the product to the market for sale and the other purchases it. This model can enable consumers to more intuitively see the quality of the product<sup>[1]</sup>.

### 2.1.3 Advantages of Large Enterprises

In 2021, the total output of garden fruits in Shanxi Province was 9.199 million tons, an increase of 619000 tons or 7.2% compared to 2020, setting a new record. Among them, apple production is the largest, with a total output of 4.302 million tons, accounting for 46.8% of the total output of garden fruits in Shanxi Province. In addition, in addition to the brands in Shanxi Province, there are also a number of professional chain service enterprises engaged in the processing and production of agricultural products with distinctive characteristics, such as apples. Among them, Shanxi Hongxiang Fruit Industry Co., Ltd. is already a major company in our city that focuses on the development, research, production, storage, and processing of apple varieties. A leading enterprise in the field of agricultural new modern agricultural technology and industrialized operation characterized by a sales one-stop service enterprise, which has also been successively rated as a municipal leading enterprise in the industrialization of rural science and technology by the City Yuncheng Chain Enterprise Company. In addition, large-scale chain beverage enterprises engaged in the processing of fruit and vegetable drinks also include Huiyuan Juice, Chain enterprises engaged in the processing and production of such food and beverage chains usually directly convert fresh seasonal fruit varieties such as apples, grapes, and cherries into concentrated fruit juices with corresponding content through first processing, thereby improving the market utilization rate of their product juices. When we mention Shanxi Province, we can't help but also immediately think of aged vinegar. In fact, a large part of it comes from a large domestic natural juice company, For example, Shanxi Yijia Food Co., Ltd., located near the factory area of Yuncheng City, has developed a new generation of natural pollution-free green food and organic and healthy fruit juice drinks - natural apple vinegar - through independent innovation and production system development. What is better to do is how to combine pure natural apple drinks with natural aged vinegar drinks, Not only will it greatly broaden and improve the Apple beverage industry chain of the entire Shanxi Yuncheng Red Fuji Apple brand product series, but also it has effectively expanded its product and sales market.

## 2.2 Weakness

### 2.2.1 Poor Product Quality

Nowadays, due to weather reasons and seed quality issues, the number of high-quality apples is very low. The growth conditions of apples are affected by temperature, precipitation, soil, and wind. In addition, it is necessary to select appropriate fruit seedlings based on the actual situation. In the northern region, two varieties, Hanfu and Hanxiang, are mainly planted. If they are not selected properly, they will not produce high-quality fruits. In some regions, if apple trees are not pruned, the quality of the fruit may also be poor. Although apple trees grow slowly, proper pruning can reduce the disease and insect pests of the fruit, including cutting off cross branches and diseased and insect branches.

### 2.2.2 Single Network Facilities

Currently, most apple farmers live in rural areas. In some remote rural areas, due to the limited planting conditions of apple trees, the vast majority of fruit tree planting areas have not been popularized to the Internet. In addition, fruit farmers also lack the knowledge to use the Internet to sell fruit. Even if they have Internet devices at home, they will not operate and can only choose the most common sales methods. In addition, the network facilities used by fruit farmers are relatively simple, The technology is not mature enough to produce high-quality fruit color and freshness<sup>[2]</sup>.

### 2.2.3 Low Production Technology

According to the conditions under which apples are planted, it can be understood that they are commonly planted in mountainous areas, and it is particularly difficult to climb and descend the mountains, not to mention transporting fruits. The farmers who grow apples are mostly self-employed, relatively scattered, small in scale, and low in organizational capacity. Due to low individual capabilities, it is difficult to achieve the integration of "production, transportation, and marketing". Most people are seeking help from others, which not only increases the cost of fruit, but also causes more or less collisions during this period, reducing the value of the fruit itself. Fruit farmers also do not have professional tools for picking, and they pick them all with bare hands. This way, the remaining apples that cannot be picked will rot and deteriorate. This is known as incomplete picking. This phenomenon indicates that the picking technology is still relatively low and the use rate of professional tools is relatively low.

## 2.3 Opportunity

### 2.3.1 Government Support

In recent years, driven by the strong and responsible leadership of the leaders of the Municipal Party Committee, Municipal Government's Fruit Supervision Department, and other departments, the Yuncheng Fruit District Bureau of our district has strengthened supervision and standardized the construction of the fruit market in accordance with the law, actively promoted and guided the management of public fruit brands. Based on the principle of implementing the national standard of "centralized creation, joint construction and sharing", we have participated in the research, drafting, and issuance of a series of standard policy documents, including the "Specific Implementation Measures for Publicity, Guidance, Promotion, and Quality Supervision and Usage Supervision Management of Public Fruit Tree Brands in the" Yuncheng Apple "Region", Standardize and urge relevant government management administrative units to actively promote and guide the widespread contact with various apple enterprises, standardize and promote the rational and standardized use of the apple public brand, and advocate that fruit farmers and fruit merchants in all districts and counties across the country should implement conscious, standardized, and honest brand management. At the same time, Yuncheng City has jointly formulated and issued public standardized technical regulations for apple related industries. It has laid a solid and credible foundation for the implementation of the unified public standardized brand construction and development plan for the "Yuncheng Apple" Apple region. "Wang Fei, Director of the Intellectual Property Office of Yuncheng City, said, "We have held several consecutive Shanxi and (Yuncheng) the second Beijing International Fruit Trade Exposition, and in total, we will successfully attract the heads of various foreign institutions from more than 60 units around the world, as well as over 4000 domestic and foreign professional merchants from the capital and various provinces." Since the middle of the first lunar month in 2020, the members of the Yuncheng City activity team in this village have successively successfully and independently planned to successfully hold or carry out the large-scale tourism series activities, festival cultural activities, and the fourth China "Yuncheng Apple Cup" provincial fruit industry photography competition of the first National "Flower Blooming River East Joy Tour Yuncheng", the first National Second Beautiful Countryside China Beautiful Countryside Hundred Flowers Fruit and Vegetable Tourism Festival<sup>[3]</sup>.

### 2.3.2 Large Market Demand

In recent years, the global sales volume of Red Fuji Apple has also increased year by year. On the one hand, the country has successively introduced a number of policies to encourage and support the



agricultural industry in recent years, supporting the sustainable development of China's agriculture. On the other hand, in recent years, with the continuous improvement of modern people's awareness of the quality of life, the large demand for daily food, fruits and vegetables, is no longer simply to eat or drink enough, but to pay more attention to the quality and health of diet. Therefore, the market demand for fruit and vegetable foods will increase significantly year by year. In this market dynamic situation, the sales of Shanxi and Yuncheng brand Red Fuji apples are excellent. In Shanxi Province, the influence of Yuncheng Red Fuji Apple is still very high. For example, in a city, people are not only interested in local apple varieties, but also have a special liking for Yuncheng Red Fuji Apple. Yuncheng Red Fuji Apple has become a habit in the hearts of Shanxi people. Therefore, the consumption of Red Fuji Apple tends to increase.

### **2.3.3 Support for Multiple Network Platforms**

In recent years, Internet thinking is slowly and imperceptibly beginning to permeate people's daily social life and work. At present, people are increasingly relying on the Internet for work, and almost all of their food, clothing, housing, and transportation will be solved on the basis of social networks. Recently, several new community group buying platforms have emerged that can not only buy frozen products, but also buy fresh products, such as buying more vegetables, Meituan Preferred, or Dingdong, which have subverted traditional thinking. Among these community group buying platforms, Apple can be called the "fruit sales king". Previously, products purchased on similar online platforms can only be delivered in 3-4 days at the earliest. However, currently, these community group buying platforms can achieve the goal of "placing a single order on the market and delivering it the next day.". People's lives have also become faster and more convenient<sup>[4]</sup>. In this era, the marketing model of agricultural products is also changing, and many farmers can sell their products using the Internet. For farmers who do not understand network knowledge, various network platforms have also launched similar activities such as "helping farmers increase their income.". To help farmers sell and increase their income, farmers only need to provide products, and the rest can be handed over to the group purchase platform. For farmers with inconvenient transportation, the community group buying platform will go to the farmers' homes and use the Internet for sales, bringing good economic benefits to both parties. It can not only sell agricultural products without overstocking inventory, but also bring benefits to farmers.

## **2.4 Threat**

### **2.4.1 Incomplete Circulation System**

Due to the limitations of apple planting conditions, most of them are located in mountainous areas with inconvenient transportation, so a special circulation system is very important for apple picking and transportation. If there is no pipeline program for apple picking, the loss rate of apples will greatly increase, and the value of apples will be reduced. "The storage and transportation of apples also need to be further strengthened. Although apples can be stored for a longer period of time than other fruits, if the temperature is not appropriate, they can also cause apple spoilage.". The coverage of logistics in rural areas needs to be further improved. Today, with the development of the Internet, many rural areas are still unable to meet the conditions for door-to-door delivery or pickup, and can only choose existing logistics enterprises to conduct transactions, or there is not even a logistics enterprise, leading to the failure of timely delivery of agricultural products after placing orders on the network. Logistics will become a major obstacle, not only delaying the time of logistics. It also reduces the freshness of agricultural products and greatly discounts the value of agricultural products themselves.

### 2.4.2 Low Brand Awareness

The brand awareness of agricultural products is closely related to product sales. The brand awareness is high, and the sales volume of the product is also high. The popularity is proportional to the sales volume<sup>[5]</sup>. Currently, Shanxi Yuncheng Red Fuji Apple does not have a strong and influential brand, which is not enough. Apple growers are mostly small-scale and dispersed farmers. If these small-scale farmers are gathered to form professional cooperatives and jointly develop e-commerce, it will have a good effect, not only creating brand awareness, but also increasing market competitiveness. Therefore, in the context of the prevalence of e-commerce, it is necessary to build brand influence and develop high-quality sales markets.

A brief summary of the above mentioned content is shown in Table 2 below

Table 2: Summary of SWOT Analysis of Shanxi Yuncheng Red Fuji Apple

Strengths	Weaknesses	Opportunities	Threats
rich natural resources	Poor product quality	Policies and local government support	Incomplete circulation system
Advantages of geographical location	Single network facilities	Apple in the sales market Large demand	Low brand awareness
There are a large number of new modern agricultural technology and industrialized management leading enterprises	Low production technology	Support for multiple network platforms	

## 3. Countermeasures for the Development of Shanxi Red Fuji Apple E-Commerce in the Context of Rural Revitalization

### 3.1 Vigorously Develop the Transportation Industry and Improve the Circulation System

With the gradual rise of the Internet, e-commerce has been widely used in various industries. Currently, the areas where apples are grown are all woodlands. Transportation is basically underdeveloped, and in order for Apple to utilize the platform for sales, it is necessary to vigorously develop the transportation industry. As the saying goes, "To become rich, build roads first<sup>[6]</sup>." Only when the roads are flat and spacious can the product be better presented to every customer. To improve the circulation system, it is necessary not only to enable vehicles to enter each village, but also to improve the logistics system of villages and towns, and build them into modern circulation bases. Vigorously developing the transportation industry can not only ensure the timeliness of transportation and reduce costs, but also drive the local economy, forming an integrated system of picking and transportation, thereby making better use of the Internet.

### 3.2 Improve Production Technology and Reduce Costs

Currently, the production technology of Shanxi Yuncheng Red Fuji apple is relatively low, and it is a long process from fruit seed cultivation to fruit tree maturation. In order to achieve good fruit quality, it is necessary to cultivate fruit trees well, so production technology is very important for fruit trees. Short and dense production technology refers to the process of dwarfing fruit trees, which not only facilitates the absorption of sunlight, but also facilitates the absorption of nutrients<sup>[7]</sup>. On the other hand, short and dense production technology can also reduce the burden on farmers, save

resources, and improve their operational efficiency. In recent years, many other apple varieties have begun to use this production technology, such as controlling the row spacing of Gala apples at 1m × 3.5m, the yield in the first and second years of the experiment was 687kg and 2145kg, respectively. Pruning fruit trees is also a production technique for improving apple yield. Regular pruning of fruit trees can not only make the branches and leaves absorb nutrients better, but also prevent the branches and leaves from oxygen deficiency and decay, with excellent ventilation effects. However, it is important to note that the timing of pruning must be appropriate.

### 3.3 Improve Variety Quality and Create Brand Awareness

Improving the quality of varieties can begin with selecting seeds. Farmers should select suitable fruit seeds based on actual conditions, taking into account environmental and climatic conditions. If you choose a variety that is not suitable for local planting, it will affect production, reduce variety sales, and reduce farmers' income, thereby affecting brand awareness. Various government departments and the entire region should work together to establish the regional public brand of "Yuncheng Apple"<sup>[8]</sup>. Continuously improve the popularity and influence of public brands in the "Yuncheng Apple" region. According to local characteristics, organically combine characteristics with products, give full play to local resource advantages, expand sales of varieties, and form a distinctive fruit industry chain, so as to enhance brand awareness and increase the added value of products<sup>[9]</sup>.

### 3.4 Encourage Professionals to Return to the Village and Hometown

As the saying goes, "One side of water and soil nourishes one side of people.". Compared to cities, rural areas need talents in related fields more. On the one hand, making full use of the advantages of e-commerce and recruiting some talents in e-commerce can effectively combine logistics knowledge to make products more fresh. On the other hand, it is necessary to make full use of the advantages of big data to attract some high-tech talents, and it is also possible to collaborate with current universities to let college students go to the countryside, It can not only improve the practical operation ability of college students, but also bring talents to the countryside<sup>[10]</sup>. In addition, the government can formulate corresponding preferential policies for talents, which can attract more talents to invest in agriculture. Encouraging professionals to return to their villages can promote the rapid development of the local economy and promote the organic integration of primary, secondary, and tertiary industries.

## 4. Conclusion

E-commerce is currently one of the main ways to achieve targeted poverty alleviation and increase farmers' income. With the rapid development of e-commerce, Shanxi Yuncheng Red Fuji Apple has also gained some "vitality", not only responding to the call of the national rural revitalization strategy, but also improving the added value of Apple itself. This article analyzes the current situation of e-commerce development of Shanxi Yuncheng Red Fuji Apple, and uses SWOT analysis methods to explore countermeasures suitable for the development of Shanxi Yuncheng Red Fuji Apple. It proposes measures such as vigorously developing the transportation industry, improving the circulation system, improving production technology, reducing costs, improving product quality, creating brand awareness, and encouraging professional talents to return to their villages. With the gradual development of e-commerce, modern technologies, resources, and talents continue to flow into rural areas, which will be conducive to the development of rural agriculture, but also bring benefits to farmers, promoting the economic development of Yuncheng region. Using e-commerce



and other knowledge to create a development process suitable for Shanxi Yuncheng Red Fuji Apple, Yuncheng Red Fuji Apple can become one of the products of "deeply promoting rural revitalization in Shanxi". In short, in the current era of rapid development of modern information technology and agricultural technology, in order to promote the rapid development of Shanxi Yuncheng Red Fuji Apple, we should vigorously develop e-commerce and improve the efficiency of e-commerce operations, in order to enhance the market competitiveness of Shanxi Yuncheng Red Fuji Apple.

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