Establishment and Operation Management of Agricultural Carbon Sink Trading Platform

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Abstract

In recent years, agricultural machinery energy saving and emission reduction work has not aroused the high attention of governments at all levels, so that agricultural machinery energy saving and emission reduction work has become a forgotten corner, but the phenomenon of high energy consumption, high emissions, high pollution and low efficiency of agricultural machinery is universal, has become a good and rapid development of agricultural machinery constraints and obstacles. This paper first analyzes the market environment and market potential of agricultural carbon sink trading platform. Secondly, the product design concept and specific products on the platform are introduced. Thirdly, the financial status and profitability of the platform are analyzed. Finally, the risks and preventive measures of the platform are analyzed.

Keywords

Trading platform; Market environment; Profitability; Risk and prevention.

1. Introduction

In 2015, countries re-signed the Paris Agreement, in order to avoid the aggravation of the greenhouse effect, the total amount of carbon emissions of each country is stipulated, and each country allocates the total amount to each enterprise, so as to control global carbon emissions. In recent years, due to the excessive increase of carbon dioxide emissions, global climate warming has led to the continuous deterioration of human living environment. Over the past 30 years, the average temperature of the earth has increased by 1 degree Celsius, and the temperature has increased by 5 degrees Celsius in the regions where the glaciers have disappeared, resulting in large temperature fluctuations in extreme regions. Rising temperatures also cause glaciers to melt away, raising sea levels and making extreme weather more frequent. It is therefore urgent to curb carbon emissions.

However, it is unrealistic to fairly require all enterprises to control carbon emissions, and some enterprises have a high cost of reducing carbon emissions, or even can not do it at all, such as airlines, and other industries, such as steel, building materials and other key industries, for them, it is not only a big emitter, but also difficult to reduce emissions. Therefore, on this basis, the emergence of carbon trading is very necessary. We know that agriculture is both an important source of global greenhouse gas emissions and a huge carbon sink system, so reducing emissions through agriculture is both a challenge and an opportunity. The agricultural carbon sink trading platform that we want to do is also full of challenges and opportunities. Our agricultural development is relatively good, but there are still a lot of farmland in waste, effective resources have not reached a reasonable application. Our platform will make use of these resources to serve enterprises and industries with excessive carbon emissions. To achieve this, we also need to play the main role of farmers, promote energy-saving agricultural technologies, encourage the development of rural renewable resources, and promote the resource utilization of agricultural and rural waste, which can effectively improve the efficiency

of energy conservation and emission reduction, and provide a material basis for carbon sink trading.

In the 21st century, China's agriculture faces the transition and transformation to large-scale and industrialization. At this critical moment in history, we will face more ecological and environmental challenges, and the inevitable choice is to take the road of ecological agriculture to realize agricultural modernization. Ecological agriculture is based on the principles of ecology and ecological economics, systematic engineering methods, so according to local conditions, comprehensive and reasonable organization of agriculture, to achieve a virtuous cycle of ecology and economy, to achieve the unity of economic, social and ecological benefits. According to the interdependence and co-prosperity between plants, animals and microorganisms, ecological agriculture realizes multi-level circulation and multi-level utilization of resources through the food chain within the ecosystem and the recycling of agricultural waste, so as to rationally invest, improve the output rate, achieve economic growth, improve the environment, improve product safety, and enhance the sustainability of agricultural development. However, after nearly 20 years of efforts, the development of ecological agriculture in China has always stayed in the pilot or a small scope. Therefore, the development of ecological agriculture has become an urgent task to walk out of a road of agricultural modernization with Chinese characteristics.

From the situation of recent years, agricultural machinery energy saving and emission reduction work has not aroused the high attention of governments at all levels, so that agricultural machinery energy saving and emission reduction work has become a forgotten corner, but the phenomenon of high energy consumption, high emissions, high pollution, low efficiency of agricultural machinery is widespread, has become a good and rapid development of agricultural machinery constraints and obstacles. Therefore, the energy saving of agricultural machinery is also urgent, to achieve the goal of energy saving and emission reduction of agricultural machinery, we must understand the way of energy saving and emission reduction of agricultural machinery, and formulate practical and effective measures in order to achieve the goal.

As far as we can see, the basic production units in the countryside of our country make the farmers with the family as the unit, this kind of smallholder economic model is not conducive to carrying out large-scale management, standardized production, but also cause transaction cost and operation cost too high. If the transaction cost is too high and exceeds the acceptable range of farmers, it will discourage farmers from participating in the project. However, if many farmers join together to participate in the project as a whole, the cost will be greatly reduced, thus improving the efficiency of market operation. Some farmers do not understand the function of carbon sink, let alone the function that changing agricultural production mode can make farmland soil have carbon sink and change the ecological environment. Therefore, it is also necessary to do a good job of publicity.

Therefore, only on the basis of developing ecological agriculture and increasing energy conservation and emission reduction of agricultural machinery, can agriculture have certain advantages in the absorption of carbon dioxide, can ecological agriculture be used to reduce emissions, can agriculture create carbon sinks, can there be carbon rights, and carbon trading can exist and have significance.

This paper establishes an agricultural and rural carbon sink trading platform, contacts farmers and enterprises that need to reduce emissions, and provides services such as developing, measuring, trading and registering agricultural carbon sinks after passing the inspection of professional certification bodies. Research on the use of natural carbon sequestration capacity of cultivated land, exchange agricultural carbon sequestration for financial returns to cultivated land, establish agricultural carbon sequestration compensation mechanism, and provide beneficial exploration for consolidating the achievements of poverty alleviation. Carbon trading market platforms turn this carbon sink capital back into assets, helping to boost the economic income of grain farmers.

2. Market Analysis

2.1. Market environment analysis

2.1.1. Analysis of micro market environment

The carbon sink market is likely to expand along with the entry into force of the Kyoto Protocol, and the carbon sink price in the entire international market shows a rising trend, which is conducive to the development of the carbon sink project of our team -- agricultural carbon sink project. According to the research, China's agricultural field soil has obvious potential of carbon sequestration and emission reduction. A series of measures can be taken to increase the soil carbon sink, so that the soil organic carbon pool difference, so that the soil from the carbon source (that is, the source of carbon dioxide) to the carbon sink. At present, there are only nine carbon emission trading platforms in China, such as Beijing Green Exchange and Shanghai Environment and Energy Exchange, Guangzhou Emission Trading Center, Tianjin Emission Exchange, Hubei Emission Trading Center, Strait Resources and Environment Trading Center, Sichuan United Environmental Exchange, Chongqing United Equity Exchange, and Shenzhen Emission Exchange. According to the pilot situation, compared with the international market, China's carbon price is generally low, China's carbon price has declined from 2013 to 2017, and gradually rebounded in 2020, the total amount of carbon pilot has declined in 2020, but the total transaction volume has increased. China's market demand for carbon sink trading platform is increasing day by day, closely follow the national policy needs to prioritize the carbon sink trading market mechanism, flexible response to market changes.

2.1.2. Macro market environment

Due to the increasingly serious trend of global warming, various countries have gradually paid attention to the issue of global carbon emission indicators. Carbon sink trading is a virtual transaction generated by the provisions of the United Nations Framework Convention on Climate Change and the Kyoto Protocol for the allocation of carbon dioxide emission indicators by all countries in the world. It plays an important role in solving the contradiction between carbon emissions caused by force majeure factors in economic development and maintaining a good ecological environment. As we all know, China is the world's largest manufacturing country, carbon emissions in the international occupy a larger proportion, which means that China will become the world's largest carbon market.

At present, the carbon sequestration projects carried out in China's carbon currency market mainly include forestry carbon sequestration, grassland carbon sequestration, ocean talks, etc., and there are few carbon sequestration projects involving agriculture. However, the "14th Five-Year Plan for Promoting Agricultural and Rural Modernization" issued by The State Council on the status quo of agricultural development, relevant strategic guidance and the content of future expected development results can be seen that China has high hopes for agricultural development. At present, even if the relevant international regulations regulate the carbon emission indicators, the global carbon emissions are still only increasing, China is in 2020 carbon emissions of nearly 10 billion tons, ranking first in the world, carbon emission pressure is unprecedented, in addition, China has made a commitment to the international community to "strive for 2030 carbon peak, 2060 to achieve carbon neutrality". Considering the "14th Five-Year Plan" on agriculture and China's international ecological environmental status, and the fact that our country is a large agricultural country, it is imperative to create an agricultural carbon sink platform to adjust the balance between carbon emission and carbon sequestration.

2.2. Market potential analysis

It can be seen that China's farming area is on the rise, the nationwide measurement of agricultural carbon sink, the establishment of agricultural carbon sink trading places, on the one hand, not only can promote China's low carbon agricultural economy better development, and international ecological environment development criteria fit, on the other hand can ease the rapid development of science and technology caused by the cost of agricultural products rise. The overall profit of agricultural products has fallen, and more and more young people are not willing to engage in the current situation of agriculture, increasing the income of farmers. Nowadays, green, low-carbon and sustainable development has gradually become an international consensus, but China's agricultural carbon sink trading places are scarce, so creating an agricultural carbon sink platform with a sound operating mechanism can not only occupy a place in the domestic market, but even open up a new territory in the international market.

Studies have shown that China's farmland soil has obvious potential for carbon sequestration and emission reduction. Through protective tillage measures, increasing paddy field planting area, increasing organic fertilizer application, adopting crop rotation system and land use methods, increasing straw returning to field and other effective management activities, the carbon pool of agricultural soil can be changed, thus affecting the total amount of greenhouse gases in the entire atmospheric environment. Among them, the comprehensive utilization project of crop straw to promote the efficient and clean utilization of crop straw resources and the construction of collection and storage system can apply for the special fund subsidy for investment in ecological civilization construction within the central budget. It shows that conforming to the international situation and national development orientation can provide a preferential way in terms of funding sources, and to some extent, can reduce the pressure on the funding sources required for the establishment of agricultural carbon sink platforms. In addition, combined with China's vast territory, agricultural accounts for more heavy, attach importance to agricultural economic development and China is the world's first manufacturing country, many manufacturing enterprises, and the fact that the demand for solid carbon can be judged in our country's carbon sink trading platform of solid carbon, carbon emission customer sources are vast, how to combine the two organic link, It is the first element that needs to be solved for the steady development of agricultural carbon sink trading platforms.

2.3. Competitor analysis

The range of trading objects for carbon sink trading venues is not limited to domestic, and there are also many carbon sink needs abroad. Many developed countries in the world are limited in their own territorial area and cannot take into account the parallel system of economy and low-carbon, so they make purchase requests to developing countries to meet their own carbon quota indicators. As various countries have entered the wave of carbon trading, the importance of carbon sink trading as a branch of carbon trading has become more and more prominent. Therefore, our team is facing not only the domestic carbon sink trading platform but also the international carbon sink trading platform. However, there is no fully mature carbon sink trading platform. Therefore, striving to create a carbon sink trading mechanism that is more mature and perfect than the current carbon sink trading mechanism in the market, and better handling the guaranteed transactions between carbon emitting parties and carbon sequestration parties is the first issue that our team should solve at present.

This kind of carbon sink trading platform has a relatively perfect operating mechanism and mature technology, and occupies most of the share of domestic and foreign carbon sink trading markets. However, the services provided by this kind of platform are more extensive, and the level of refinement of services provided in the field of agricultural carbon sink is not as good as ours. We can regularly dispatch employees to cooperate with such companies, provide

outsourcing services such as algorithms for such platforms, and send employees to the companies that belong to such platforms for staff training to learn related technologies and excellent management and operation methods.

This kind of company started late, belongs to the transformation stage, and belongs to our main competitors. Although our financial strength and corporate culture cannot match, the carbon sink trading market is still an opportunity market, and the participation of the general public is not high, and the attention to this kind of company is not high, so the brand influence formed by this kind of company will not be strong in the early stage. At the same time, our profit methods and product and service refinement are more professional, which is conducive to gaining more customer recognition in the initial market.

This kind of carbon sink app is an indirect competitor in the early stage of our development, and will develop into a direct competitor when we enter the app design stage after developing to a certain scale. The technical conditions and application ability of such competitors are more mature, and there is a good development background, and the member price is higher. We can actively cooperate with such competitors in the early stage, learn the development mode and management mode of such competitors in the app field, and make use of our lower price advantage to pave the way for our entry into the app field.

3. Product Design

3.1. Product design concept

Agriculture is an important source of greenhouse gas emissions, but also a huge carbon system, agriculture in the carbon reduction work has a lot of potential. According to the Food and Agriculture Organization of the United Nations (FAO), agricultural land releases more than 30% of global anthropogenic greenhouse gas emissions, equivalent to 15 billion tons of carbon dioxide per year; Agroecosystems can offset 80% of global greenhouse gas emissions caused by agriculture. According to the data released by the Ministry of Ecology and Environment, the total net greenhouse gas emissions in China in 2014 was 11.186 billion tons of carbon dioxide equivalent, of which agricultural emissions accounted for 7.4%. In recent years, China has adhered to the road of green agriculture, and implemented actions such as reducing the amount of chemical fertilizers and pesticides, and utilizing crop straw and livestock manure as resources, with remarkable results. In 2005, agricultural greenhouse gas emissions per 10,000 yuan of GDP were 3.4 tons, which fell to 2 tons in 2010, and further dropped to 1.4 tons in 2014. Compared with the highest value in 2015, the amount of agricultural fertilizer applied in 2019 was reduced by 6.19 million tons (discounted), and it is expected that the cumulative reduction of fertilizer during the "13th Five-Year Plan" period will exceed 10 million tons. At the same time, the comprehensive utilization rate of livestock manure and straw has steadily increased. The reduction of chemical inputs and the integrated use of waste have strongly promoted the reduction of agricultural GHG emissions. China's commitment to achieve carbon peak by 2030 marks the country's new and higher requirements for green development, and agriculture should play a bigger role and make greater contributions in this regard. The Fifth Plenary Session of the 19th CPC Central Committee proposed to "fully implement the emission permit system, and promote market-oriented trading of emission rights, energy use rights, water rights, and carbon emission rights." In March 2021, the Ministry of Ecology and Environment and the Ministry of Agriculture and Rural Areas jointly issued the "Agricultural non-point source pollution control and supervision and Guidance Implementation Plan" clearly proposed to explore the "point source - non-point source" emission trading pilot. This also provides a policy basis for incorporating agricultural emission reduction into the pilot emission trading program at the national level. In the long run, incorporating agricultural emission reduction into emission rights and emission rights trading, and first implementing it in the carbon trading

market, is not only a possible way to reduce the total cost of pollution reduction and improve the overall development quality of the socio-economic ecological complex system during the "14th Five-Year Plan" period, but also an important driving force to promote sustainable agricultural emission reduction and promote the realization of the "carbon peak" goal.

There is no continuous official data to reflect the detailed situation of agricultural carbon emission in our country, so this paper shows the situation of agricultural carbon emission in our country by using the Food and Agriculture Organization (FAO) database 1. From the available data, it can be seen that since the statistics were collected in 1961, China's agricultural carbon emissions have shown an overall upward trend, experiencing three stages of steady growth and rapid growth tending to peak. In 1961, the total carbon emissions from agriculture were 249 million tons of carbon dioxide equivalent (CO2eq), which decreased slightly to 885 million tons in 2016 and 870 million tons in 2018. If this trend is followed, agricultural carbon emissions have tended to peak. But carbon emissions from energy consumption have been on an upward trend, rising from 300,232 million tons in 1979 to 237 million tons in 2018, an increase of nearly seven times. As of 2018, the share of energy consumption has surpassed that of fertilizer, reaching 27.18% of agricultural carbon emissions, becoming the largest source of emissions. With the further improvement of China's agricultural mechanization level in the future, it is expected that the carbon emissions caused by agricultural energy consumption will further rise, which will become the biggest uncertain factor affecting the overall carbon peak of China's agriculture. In terms of emission sources, energy consumption, fertilizer, animal intestinal fermentation, and rice cultivation are the four most important sources, accounting for 76.9% of the total emissions in 2018. From the perspective of the composition of emissions, China's agricultural carbon emissions are mainly methane and nitrous oxide, two kinds of noncarbon dioxide greenhouse gases, and carbon dioxide is the third source of greenhouse gases. In 2018, the ratio of methane, nitrous oxide and carbon dioxide emissions was roughly 3:4:3. Agricultural emissions account for a relatively high share of "non-CO2" emissions, also globally. According to the Fourth Assessment Report of the IPCC, in the global greenhouse gas emissions, methane emissions from agriculture account for 50% of the total methane emissions, and the value of nitrous oxide is 60%.

In December 2014, the National Development and Reform Commission issued the Interim Measures for the Administration of Carbon Emission Trading, which clarified issues such as quota management, emissions trading, verification and settlement of quotas, and supervision and management responsibilities of carbon trading authorities, laying the institutional foundation for a carbon trading system. By the end of 2019, more than \$78 billion had been raised in the carbon market, mainly to support energy efficiency, low-carbon transportation, and vulnerable groups. As an important market-based emission reduction tool, China's carbon market has a solid foundation for development and great potential. However, since the national unified carbon market has just started, effective solutions need to be put forward for outstanding problems such as imperfect policy framework, insufficient financialization, and insufficient play of the role of the carbon market. The national unified carbon emission trading market (thermal power industry) was officially established at the end of 2017, and the first compliance cycle was officially launched on January 1, 2021. The Measures for the Administration of Carbon Emission Trading (Trial) have been reviewed and adopted by the Ministerial meeting of the Ministry of Ecology and Environment on December 25, 2020, and will come into force on February 1, 2021. According to the National Development and Reform Commission estimates, in 2021, China's carbon trading market turnover will reach 250 million tons, the annual turnover of up to 6 billion yuan, compared with the "13th Five-Year Plan" period, the "14th Five-Year Plan" period of carbon emissions trading volume is expected to increase 3 to 4 times, by 2030 is expected to accumulate trading volume or more than 100 billion yuan. At present, China's agricultural carbon emission reduction trading market has not

yet formed, and the national agricultural authorities mainly participate in and support the research of agricultural carbon emission reduction project methodology. At present, the industries included in the scope of carbon emissions trading are mainly thermal power generation, petrochemical, steel, nonferrous metals, cement, heat, aviation, construction and other industrial enterprises, and agriculture has not been included in the trade. At the local level, only Hubei pilot carbon market supports agricultural carbon emission reduction projects to enter the market through the offset mechanism in the name of targeted poverty alleviation, and the actual agricultural carbon emission reduction (CCER) used for implementation of the offset is about 1.07 million tons, achieving economic benefits of more than 16 million yuan. However, methodological research on voluntary carbon emissions are still lacking. The establishment of agricultural carbon emission reduction market and the design of trading mechanism are insufficient, and there are few studies on the radiation effect, linkage mechanism and income increase mechanism brought by agricultural carbon emission reduction and carbon emission reduction and the radiation effect, linkage mechanism and income schange.

According to the latest report of the Chinese government, China may launch the domestic carbon emission trading market no later than 2014, the National Development and Reform Commission is brewing the relevant management measures of environmental rights trading, the national energy trading institutions will be limited to 10, so whether the establishment of a special carbon trading center will be limited in the future is uncertain. Therefore, seizing this good opportunity of national policy and economic development mode transformation, the construction of agricultural carbon sink trading platform has become a top priority. In recent years, Fujian Province has also made a lot of effective work in coping with climate change. During the "11th Five-Year Plan" period, Fujian Province has shut down a lot of small thermal power and cement plants and other high-energy, high-emission projects, and carried out a series of development in the field of biodiesel, clean diesel, wind power, nuclear power, in the thermal power emission reduction, energy-saving buildings, industrial energy conservation and emission reduction, environmental protection and energy-saving equipment can show huge business opportunities, low-carbon economy is expected to become an important driving force for the development of West China. At the same time, Fujian Province has the innate advantage of agro-forestry, and the effect of agro-forestry carbon sink is significant. The forest coverage rate of Fujian Province ranks first in China, and the forest carbon sink effect is huge. According to relevant studies, 1hm2 forestland can absorb 5.77×104tC02, carbon sink forestry has become a new highlight of clean production (CDM) projects. At the same time, Fujian Province is located in the southeastern hilly region of red soil, which is an important production base of tropical and subtropical economic forest fruits and tea in China. The agricultural resources in this region have great potential to fix CO2, and if properly developed, it is also expected to become an important carbon sink. In terms of practical significance, low-carbon agricultural economy is a new research field, its essence is the deepening and refinement of ecological economy. Low-carbon agriculture is the organic combination of circular agriculture, ecological agriculture and green agriculture, which complement each other and develop cooperatively. It is not only the simple addition of technical models, but the optimization and reorganization of different production subsystems to form a virtuous cycle to achieve the goal of energy conservation, emission reduction and foreign exchange. It is clear that green agriculture should contribute to the fight against global climate change. In recent years, China has introduced relevant policies and proposed six specific measures, including multi-channel financing of credit funds, multi-field innovation of financial services, multi-level expansion of direct financing, multi-directional expansion of insurance functions, multi-level promotion of financial cooperation between Fujian and Taiwan, and multi-platform support for the construction of financial ecological environment, in addition to the existing good domestic

financial ecological environment. Therefore, if we make full use of these advantages of carbon emission reduction and good financial environment, give full play to the advantages of Taiwan, and build the construction of agricultural carbon sink trading platform, it will play an important role in promoting the development of domestic low-carbon economy.

Under such a severe ecological environment and good national policies, we can establish our own agricultural carbon sink trading platform. At the same time, the establishment of the carbon sink trading platform provides a feasible path and a typical demonstration for agriculture to enter the carbon market. Its significance is mainly reflected in three aspects: The first is to realize ecological economy through agricultural carbon sink trading, which helps to transform "clear water and green mountains" into "Jinshan and silver mountains"; Second, by encouraging farmers to increase carbon sink to obtain ecological benefits, help to increase farmers' income and promote common prosperity; Third, by encouraging farmers to take measures to increase sinks, it can not only improve the climate resilience of the agricultural system, but also reduce environmental pollution, and help build a community of human and natural life.

3.2. Product presentation

With the increasingly serious problem of global climate change, carbon trading, as an important environmental economic means, has gradually become the focus of governments and enterprises. In order to help users better participate in the carbon trading market, we designed an APP called "Carbon Trading Platform". The platform aims to provide users with relevant information to help them make financial investment decisions, while also offering services for high-emitting companies to purchase carbon emission rights. In addition, we are committed to promoting the improvement of the downstream market supply chain of carbon sink trading, and helping farmers to increase their incomes through cooperation with carbon emission companies and rural carbon sink projects. This article will detail the main features and monetization model of the platform.

The main functions of the carbon sales APP are:

(1) Information query: The carbon trading platform provides comprehensive carbon trading information, including carbon emission price, trading volume, trading time, etc. Users can quickly find the information they need through the search function to help them understand market dynamics and make investment decisions.

(2) Data analysis: The platform provides professional data analysis tools to conduct in-depth analysis of the carbon rights trading market. Users can understand the development trends, risks and opportunities of the market through the form of charts and reports, so as to develop more scientific investment strategies.

(3) Fund management: The carbon rights trading platform provides fund management functions, and users can view their account balance, transaction records and income in real time. The platform also provides fund transfer and withdrawal functions to facilitate users to operate funds.

(4) Investment advice: The platform provides personalized investment advice according to the user's investment preference and risk tolerance. Users can choose their own investment plan according to their own needs to improve investment returns.

(5) Enterprise consulting: The carbon rights trading platform provides professional consulting services for enterprises to help enterprises understand carbon rights trading policies, market rules and trading processes. The platform also provides carbon emission accounting and carbon emission right purchase services to help enterprises reduce carbon emission costs and improve competitiveness.

(6) Rural Carbon Sink Project cooperation: The Platform cooperates with rural carbon sink projects to help farmers increase their income by promoting rural carbon sink projects. Users can understand the situation of rural carbon sink projects through the platform and choose to participate in cooperation to achieve a win-win situation.

The carbon rights trading platform is committed to promoting the improvement of the downstream market supply chain of carbon sink trading, and helping farmers increase their incomes through cooperation with carbon emission enterprises and rural carbon sink projects. Specific measures are as follows:

(1) Cooperation with carbon emission enterprises: The platform establishes cooperative relations with carbon emission enterprises, and helps enterprises reduce carbon emission costs and improve competitiveness by providing carbon emission accounting and carbon emission right purchase services. At the same time, the platform can also cooperate with enterprises to carry out carbon sink projects, through planting trees, wetland protection and other ways to reduce carbon emissions of enterprises.

(2) Cooperation with Rural carbon sink projects: The Platform cooperates with rural carbon sink projects to help farmers increase their incomes by promoting rural carbon sink projects. Users can understand the situation of rural carbon sink projects through the platform and choose to participate in cooperation to achieve a win-win situation.

(3) Training and education: The platform provides training and education services to help farmers and enterprises understand the relevant knowledge and skills of carbon rights trading. Through training and education, improve the ability of farmers and enterprises to participate in carbon rights trading, and promote the improvement of the downstream market supply chain of carbon sink trading.

Carbon trading platform is an APP focusing on carbon trading, which helps users make capital investment decisions by providing information query, data analysis, fund management, investment advice and other functions. At the same time, the platform also provides consulting services for enterprises to help them reduce carbon emissions costs and improve competitiveness. Through cooperation with carbon emitting enterprises and rural carbon sink projects, the platform promotes the improvement of the downstream market supply chain of carbon sink trading and helps farmers increase their incomes. The profit model of the platform mainly includes consulting fees, member benefits and advertising revenue. Through the above functions and profit model, the carbon rights trading platform will provide users with a convenient, efficient and safe carbon rights trading environment, and promote the development and prosperity of the carbon rights trading market.

4. Financial Analysis

4.1. **Financing**

Self-financing: 66,600 yuan/person, 15 members total 1 million yuan. Investment capital: 250,000 yuan/family, a total of 500,000 yuan for 2 families. Bank loan: 250,000 yuan/two, 500,000 yuan in total. Total funding: 2 million yuan

4.2. Use of funds

App development cost: The salary of 4 programmers with more than 1 year's work is about 10,000 yuan per month, and the development of a B2B software requires about 4 programmers to jointly develop for 6 months, a total of 240,000 yuan.

Work site: The business incubator base is the work site, and the monthly cost is about 10,000 yuan.

Equipment cost: (1) Table and chair cost: 300 yuan a set, 10 sets total 3000 yuan. (2) Computer cost: 10000 yuan per set, 7 sets total 70000 yuan. (3) Server fee: Alibaba Cloud server, five-year monthly payment of 6,144 yuan, annual record of 73,728 yuan

Staff cost: RMB 7000 / month for 2 carbon asset managers, RMB 7000 / month for 2 carbon emission managers, RMB 7000 / month for 2 carbon emission inspectors, RMB 7000 / month for 2 carbon traders. Customer service 4000 yuan/month, a total of 2. A total of 768,000 yuan/year.

Advertising expenses: divided into online and offline, a total of 500,000 yuan.

4.3. Operational capacity

(1) Turnover of current assets. At the beginning of the year, the total assets were 225,272 yuan, the total assets were 1096,711 yuan at the end of the year, the average balance of current assets was 660,991.5 yuan, and the turnover rate of current assets was 1.65 yuan, close to the best turnover rate of current assets 2, indicating that our company has a good use of funds, and under the fast turnover speed, the relative saving of current assets can enhance the income generation ability of enterprises.

(2) Solvency. Current ratio: 1096711/500000*100%=219%. The current ratio of our company is greater than 200% of the best ratio, indicating that our company has strong turnover speed, realization ability and realization value, so we have strong solvency.

5. Risk Analysis

5.1. Identification of risk influencing factors

5.1.1. Financial risks

The cost of capital is too high, and the cost of capital generally refers to the price paid by the fundraiser to raise and use the capital. The cost of capital is the primary factor to be considered when the fund raiser chooses the source of capital. The high cost of capital makes it impossible to carry out many financing activities that could have been carried out. First of all, at present, China's agricultural production is mainly to get food, for the formed farmland, on the basis of the development of technological innovation is a large cost project, and for the unformed farmland, the need to plan the development direction in advance, the cost is not small. Moreover, with the development of the economic and social environment, the cost of technological transformation and labor costs have risen year by year, and the total cost has also risen, showing a jump upward momentum. Secondly, for land, if there are problems in the site selection of projects, such as road construction and urban expansion, land prices will increase, which will bring huge opportunity costs to agricultural carbon sink projects.

5.1.2. Managing risks

(1) Quality of managers: The personal quality of managers includes three aspects: moral character, knowledge level, and ability. The management of our company are college students, facing various problems in the company's operation process lack of practical experience, comprehensive quality is weak.

(2) Organizational structure: Organizational structure refers to the division of responsibilities, scope of rights, and the overall framework of division and cooperation among departments within the company. In the early stage of the establishment of the company, the organizational structure of the company is simple, the division of responsibilities among the board of directors, the general meeting of shareholders and the management is not clear enough, and there may be conflicts in the handling of some problems, resulting in the company's low operating efficiency.

(3) Management process: The management process directly affects how the company develops and in what direction. The management personnel of our company are all college students, lack of practical management experience, therefore, in the actual management process, it is easy to appear improper management situation and bring losses to the company.

5.1.3. Market competition risk

Innovation in the field of agriculture makes the investment community pay more attention to agricultural carbon sequestration. More and more multinational companies and agricultural innovation companies begin to enter the field of agricultural carbon trading, and they start earlier and have rich experience, which is a big competitor for us.

5.1.4. Industry risks

At present, there is still a certain gap between the agricultural carbon sink measurement and certification technology of developing countries -- China and the international advanced level, especially the authorities in agricultural carbon sink certification and measurement are in developed countries, which makes the trading status of carbon sink sellers in developing countries and carbon sink buyers in developed countries unequal, which leads to the generation of financing risks. China is one of the potential biggest sellers of carbon sink, and as a member of a developing country, inequality in this level of technology may damage our country's interests in international carbon sink trade seriously.

Agricultural carbon trading rules are very strict, development procedures are relatively complex, sales contracts involve a wide variety of customers, the contract term is very long, non-professional institutions are difficult to develop and execute such projects. At present, we are still in the initial stage, the lack of professional technical consulting system to help analyze, evaluate, avoid trading risks, which will also lead to the generation of financing risks.

5.2. Risk avoidance measures

5.2.1. Financial countermeasures

There are several ways to minimize transaction costs in the agricultural carbon sink market:

(1) Establish a relatively simplified and standardized trading system and trading procedures. The complex and sophisticated trading system provides a large amount of information and fast feedback of information. At the same time, the measurement and inspection procedures of agricultural carbon sink credit trading are simplified as far as possible, and these procedures are standardized, so as to enable project developers to complete the project document design and reduce consulting costs.

(2) Design and use of standardized contracts. The standardized contract can avoid the two sides of the transaction to negotiate the contract terms of each transaction, which is conducive to reducing the negotiation cost of both sides.

(3) Expand the scale of agricultural carbon sink trading projects. In the process of agricultural carbon sink trading, many costs are fixed or do not increase significantly. For example, search costs, negotiation costs and certification costs are almost fixed in the process of trading, while approval costs and verification costs generally do not increase significantly with the expansion of project scale.

5.2.2. Management countermeasures

(1) In terms of managers: First of all, we should strengthen the training of managers, carry out special training for the moral character, knowledge level and ability of managers, and improve the comprehensive quality and management ability of managers; In addition, attention should also be paid to improving the ability of managers to communicate and collaborate with each other to improve management efficiency.

(2) In terms of organizational structure: First of all, we should improve the organizational structure framework of the company and clarify the responsibilities of all levels and departments; At the same time, the establishment of information communication channels, strengthen the company and the society, the company's internal information circulation; In addition, we should also pay attention to the introduction of innovative talents to inject fresh blood into the development of the company.

(3) In the management process: first of all, it is necessary to formulate clear business objectives and improve planning arrangements; Secondly, we should strengthen the professional skills training and normative supervision of managers to ensure that managers make fewer mistakes to the maximum extent.

5.2.3. Market competition countermeasures

To cultivate domestic investors, the agricultural carbon sink trading market is closely related to the global economic development, and the risk of economic downturn will make the carbon trading market turn from a bull market to a bear market. With the development of economy and society in our country, the emission of greenhouse gas in our country will soon surpass the United States to become the first largest emitter in the world. Cultivating strong domestic emitters to actively participate in agricultural carbon sink trading not only contributes to the realization of China's emission reduction target, but also plays a positive role in stabilizing the price fluctuation of agricultural carbon sink credit.

5.2.4. Industry countermeasures

To improve agricultural carbon sink measurement and certification technology level, China's agricultural carbon sink related management departments and science and technology workers must strive to improve our country's agricultural carbon sink measurement and certification technology level. In this process, the government should play an active role in promoting, and formulate corresponding policies at home to encourage relevant departments to improve their technical level and pay attention to the training of relevant scientific and technological talents. We will promote the development of the intermediary market and strengthen information services. Timely grasp of market information and understanding of national policies is very important for operators to correctly identify risks and improve risk prevention ability. In short, the implementation of agricultural carbon sink trading can not only introduce a large number of foreign funds to carry out ecological agriculture projects, but also alleviate the demand for funds. In this way, we can further increase the protection and investment in food crop cultivation to ensure food security in our country. As long as we fully understand the financing risk of agricultural carbon sink trading and take effective measures to prevent it, it will effectively promote the development of agricultural carbon sink trading.

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