

## Discussion on Some Issues of Pledge Financing of New Plant Breeding Rights

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### Abstract

General Secretary Xi Jinping and the CPC Central Committee attach great importance to the protection and application of intellectual property rights, especially in the field of breeding, and new plant varieties are unique intellectual property rights of seed enterprises, and pledge financing of new plant variety rights provides a new financing channel for seed enterprises. Due to the imperfection of relevant laws and supporting measures and the lack of relevant theoretical research, there are still many problems in the pledge financing of new plant variety rights. In view of the problems in practice, the feasibility of pledge financing of new plant variety rights should be clarified, and more theoretical support should be provided for its legitimacy; the scope of the object of pledge financing of new plant variety rights should be determined, and the assessment system of pledge financing of new plant variety rights should be improved, so as to set up a perfect system of assessment of the value of new plant variety rights in terms of the assessment methodology, the assessment organisation, the assessors and the market construction, and so on; the risk prevention of pledge financing of new plant variety rights should be improved, and the enterprises should adopt a variety of measures to prevent the risk of new plant variety rights. To improve the risk prevention of pledge financing of new plant variety rights, enterprises should adopt a variety of intellectual property rights to collect pledges to prevent the risk of depreciation of pledges, use a variety of measures to prevent the risk of infringement in an all-round way, set up a risk compensation fund mechanism led by the government to solve the market risk, and set up a type of insurance for new plant variety rights to solve the internal risk of the enterprise; and to solve the difficulties in the realisation of the pledge right faced by the new plant variety rights as an intellectual property rights pledge financing in realising the realisation channel.

### Keywords

New Plant Variety Rights; Pledge; Object Scope; Assessment System; Risk Prevention; Realisation Channels.

### 1. Introduction

New plant variety rights are the unique intellectual property rights of seed industry enterprises, and the use of pledge financing of new plant variety rights provides these enterprises with a new financing method, which significantly alleviates the financing difficulties. However, in China, although some banks have begun to try this financing business, relevant laws and regulations, such as the Civil Code and the Regulations for the Protection of New Varieties of Plants, are not yet perfect, and variety right holders face many uncertainties in the process of pledge financing. In terms of theoretical research, scholars at home and abroad have conducted relatively in-depth research on intellectual property-related theories, and the research results are abundant, but the research on intellectual property pledge financing is very little, and the

theoretical research on pledge financing of new plant variety rights is even more rarely paid attention to, and most of them are focused on the application of variety rights, the protection of new plant variety rights and other aspects, or they are just a passing reference to the problems related to the intellectual property pledges, which is lack of comprehensiveness, In-depth, systematic discussion, forward-looking also needs to be strengthened, plant new variety rights pledge financing is still a new topic. As China enters a new stage of development, it is especially crucial to study the issue of pledge financing of new plant variety rights in seed enterprises. This can not only fundamentally solve the current financing dilemma, but also play its role in financing, accelerate the transformation of intellectual property rights into intellectual capital, for enriching the varieties of rights pledge business of financial institutions, alleviating the problem of insufficient funds of seed enterprises, promoting the high-quality development of seed enterprises, giving full play to the role of seed enterprises in stimulating the vitality of agricultural and rural development and promoting rural revitalisation, and thus promoting financial support for innovation It is of great theoretical and practical significance for the improvement of the intellectual property system, the realisation of the strategy of a strong intellectual property country and the construction of an innovative country.

## **2. Concepts and Characteristics of Pledge Financing of New Plant Variety Rights**

### **2.1. Concept of Pledge Financing of New Plant Variety Rights**

Pledge financing of new plant variety rights is still essentially a pledge of rights, and the relevant provisions on pledge of rights are applicable. In the judgement of pledge financing of new plant variety rights, as long as the new plant variety rights comply with the three basic principles of pledge financing of rights (i.e.: firstly, the rights have property rights other than ownership rights; secondly, the rights are transferable rights in accordance with the provisions of the law; and thirdly, the property rights can be pledged), and are recognised by the financial institution, it can be deemed to be in compliance with the conditions of pledge financing, and is recognised by the financial institution, it is deemed to be eligible for pledge financing. Article 123 of the Civil Code stipulates that the right to new plant varieties is a part of intellectual property rights as well as a right in the same way as patent and trademark rights. Paragraph 5 of Article 440 of the Civil Code stipulates that property rights in transferable intellectual property rights can be pledged.[1] Article 8 of the Regulations for the Protection of New Varieties of Plants also stipulates that variety rights can be transferred in accordance with the law.[2] Therefore, the relevant provisions of the pledge of rights should be applied in pledge financing in accordance with the law.

Pledge financing of new plant variety rights is also a kind of pledge financing of intellectual property rights, in which an enterprise or an individual makes use of the intellectual property rights owned by the enterprise or the individual to guarantee to a financial institution, or to be exact, to guarantee the property rights in intellectual property rights to a financial institution, and decide whether to release the funds after the financial institution carries out an assessment and determination. According to the above provisions, pledge financing of new plant variety rights means that in order to obtain funds, the owner of new plant variety rights (the debtor or a third party) puts the exclusive possession of new plant variety rights into the possession of the creditor, and when the debtor fails to perform the mature debt or the circumstances agreed by the parties to realise the pledge right occur, the creditor has the right to sell the property at a discount or the price of the right at auction to receive compensation first. The right to be compensated.

## 2.2. Characteristics of Pledge Financing of New Plant Variety Rights

Pledge of new plant variety rights is a kind of financing activity of enterprises, which pledge the property rights in the new plant variety rights, so as to obtain the funds needed for scientific research and production. Pledge financing of new plant variety rights is a special kind of rights pledge, which has the common characteristics of rights pledge but also has some characteristics of its own.

### 2.2.1. Uncertainty in Pledge Financing of New Plant Breeder's Rights

Uncertainty is an important feature of pledge financing of new plant variety rights. This feature is not only an important feature of pledge financing of new plant variety rights, but also an important feature in pledge financing of intellectual property rights. Uncertainty is mainly manifested in its own characteristics, difficult to assess, unstable value, easy to infringe and so on. [3] New plant variety right has its own characteristics different from patent right, trademark right and other rights, such as the life of the object, new plant variety right takes new plant variety as the object, which has its own life cycle, and the value is affected by the geographical and temporal influence, which leads to the process of pledge financing of new plant variety right with more influencing factors, which is mainly manifested in the uncertainty of value of the pledged object itself that leads to the difficulty of assessment, and the pledge object is more It is mainly manifested in the difficulty of evaluation due to the uncertain value of the pledged object itself, the susceptibility of the pledged object to the influence of the external environment and the uncertain value caused by infringement [4].

### 2.2.2. Effectiveness of Registration of Pledge Financing of New Plant Variety Rights

Publicity by way of registration is an essential element for the effectiveness of pledge financing of new plant variety rights. China adopts the mode of "contract + publicity (delivery or registration)" for the effective elements of the security right, and in the process of pledge financing of new plant varieties, the signing of the contract between the creditor and the debtor and the setting of the pledge are undoubtedly the most crucial links, which determines whether the pledge financing can be successful or not. [5] Article 444 of China's Civil Code stipulates that: where a pledge is made of property rights in intellectual property such as exclusive right to registered trademarks, patents, copyrights, etc., the pledge right shall be established from the time of registration of the pledge. Plant variety right belongs to intellectual property rights, the relevant provisions of pledge of rights are applicable, the right is not an object, and the plant variety right belongs to the rights without securitisation, in this regard, the creation of a pledge on the plant variety right can not be based on the transfer of possession for publicity. The creation of a pledge of new plant variety rights can only be completed through registration, not only that, the creation of a pledge of new plant variety rights needs to be permitted by the relevant authorities to obtain, but the permission of the relevant authorities without registration is still not known to the public, and cannot ensure the fairness and transparency of the information, so, of course, the registration is the formula method for the creation or transfer of new plant variety rights [6].

### 2.2.3. Time Limitations on Pledge Financing of New Plant Breeder's Rights

Pledge financing of new plant variety rights must occur within the term of protection of the new plant variety rights. Timeliness is a characteristic of intellectual property rights except for some intellectual property rights, and we can consider it as one of the characteristics of most intellectual property rights, including plant variety rights, as an important distinction between material property rights. [7] The right to a new plant variety is also granted a legal time limit. Within the legal time limit, the right is protected by law. The right holder enjoys the rights of disclosure and control over the plant variety. [8] During the period of right validity, which is the authorized time period, the right holder has the right to exercise control over the protected object, including its use, disposal, and benefits. In the process of pledge financing of new plant

variety right, the right holder has the right to dominate the new plant variety is also the premise of the financing process, only if the right holder legally owns and disposes of the right in accordance with the legal procedures, it can make the whole financing process lawful and smooth to go on. Once the legal period is exceeded, the right holder will no longer enjoy the exclusive right of domination, and the right will be circulated to the public domain, and anyone can use it at will, which is formulated for the purpose of balancing the relationship between the right holder and the public interest, and also for the development of the whole society.

### **3. Current Status of Pledge Financing of New Plant Variety Rights**

#### **3.1. Current Practice of Pledge Financing of New Plant Variety Rights**

The pledge of new plant variety rights, compared with the pledge of fixed assets in the past, can give seed industry enterprises more optional security methods, and opens up a new path for seed industry enterprises to solve the contradiction of having technological advantages but no financial support and restricted development. Due to the special nature of new plant variety rights, banks and other financial institutions require high conditions for the subject of pledge financing of new plant variety rights when carrying out business. In practice, the demand for pledge financing of new plant variety rights has gradually increased, and successful cases of pledge have appeared from time to time. Behind the successful cases, there are certain risks, and the existence of these risks is an obstacle to the development of pledge financing of new plant variety rights. Therefore, in order to vigorously develop a new type of security method mainly based on pledge financing of new plant variety rights, targeted improvement measures must be put forward to accelerate pledge financing of new plant variety rights, promote the high-quality development of seed industry enterprises, and drive the research and development of intellectual property rights of science and technology-based enterprises.

##### **3.1.1. Successful Practice of Pledge Financing of New Plant Variety Rights**

In practice, in order to give better play to the value of new plant variety rights, under the continuous efforts of all parties, the successful cases of pledge financing of new plant variety rights keep appearing.<sup>2021</sup> On 11th January, China's first case of pledge financing loan project of new plant variety rights was implemented in Changji. Jiu Shenghe Seed Industry Co., Ltd. took the new plant variety rights enjoyed by the company as the subject of pledge and got a loan of RMB 50 million from Agricultural Bank of China Changji Branch for the pledge of new plant variety rights, which is the first precedent in China for the pledge of new plant variety rights for financing and loan. [9] In this case, Nine Sacred Harvest Seed Industry Co., Ltd. entered into a contract of pledge of new plant variety rights with Changji Branch of Agricultural Bank of China as the grantor of new plant variety rights and also as the debtor. Jiu Shenghe Seed Industry Co., Ltd. is a joint-stock enterprise integrating the selection and breeding of new varieties of wheat, cotton and corn, seed production and processing as well as marketing services, with a total asset size of nearly 1.2 billion yuan and 56 crop varieties with independent intellectual property rights. The new plant variety right pledge project was validated in the Ministry of Agriculture and Rural Affairs, and received the Certificate of Pledge Registration, and the pledge financing contract came into effect. The implementation of China's first new plant variety project is an attempt in the field of intellectual property rights, for science and technology-based small and medium-sized enterprises, especially seed industry enterprises, opened up a new financing channel, can effectively solve the dilemma of the enterprise's financial constraints, the value of intellectual property rights is truly converted into the value of property, and bring practical benefits for seed industry enterprises. At the same time, banks and other financial industries can keep abreast of the times, develop new economic products for intellectual property rights, and provide efficient financial services for more high-quality enterprises, which has a strong impetus to the development of China's science and technology innovation industry.

### 3.1.2. Exploration of a New Model of Financial Guarantee by Seed Enterprises

Grain is stable and the world is safe. Seed industry occupies an important position in the development of crops in China, and the development of pledge financing of new plant variety rights has injected more economic vitality into science and technology-based enterprises, and has become the fresh blood that promotes the financing of seed industry enterprises. In recent years, seed enterprises in various provinces have begun to try to pledge new plant variety rights to obtain financing and expand production. Among them, Sanming City of Fujian Province and Xinjiang Jiu Shenghe Seed Industry Co., Ltd. are the first to create a new precedent of financing by pledging new plant variety rights, which provides successful experience for other financing companies. In the development process of financing by pledge of new plant variety rights, different financing companies no longer only finance by pledge of individual new plant varieties, but start to explore new modes of guarantee in the process of pledge financing. Establishment of a new mode of evaluation, unified registration and selection of pledged varieties. Seed industry enterprises in different provinces pledge financing with new plant variety rights developed by themselves, and in the process of pledge financing development, they have explored new pledge modes, carried out all-round supervision and risk prediction, and continuously reduced the impacts caused by risks.

## 3.2. Problems with Pledge Financing of New Plant Breeder's Rights

### 3.2.1. Scope of Object of Pledge of New Plant Variety Rights Ambiguous

The object of intellectual property rights determines the scope of the object of intellectual property rights pledge financing to a certain extent, and clarifying the scope of the object of the pledge of new plant variety rights has an important development role in promoting the pledge of new plant variety rights. On the basis of the legitimacy of the pledge of new plant variety right, looking at the relevant legal provisions and practice of the pledge of new plant variety right, we find that the focus of the controversy surrounding the new plant variety right is that, although it is stipulated that the application for the new plant variety right is required, the conditions for the pledge of new plant variety right are not limited to this, and that, as for the scope of the objects of pledge of new plant variety right, the application right for the new variety right, the licence income right, the licence income right, the licence income right, and so on. Whether the application right of new plant variety right, licence income right and other related rights can be pledged as a property right is not only a highly controversial issue in the current academic circles, but also a direction to further promote the development of pledge financing of new plant variety right. Due to the overly principled provisions of the law, the scope of the object of pledge of new plant variety rights is unclear, which leads to the predicament that the pledgee has difficulty in obtaining loans when facing the financing of science and technology enterprises with the object of financing of new plant variety rights that is not explicitly stipulated in the law.

### 3.2.2. Difficulties in Assessing the Value of Pledges of New Plant Variety Rights

As an intangible intellectual property right, the greatest efficiency of new plant variety right lies in its assessability. Evaluability is one of the important factors affecting the pledge financing of new plant variety rights, and the pledge financing lies in the exchange value, and when the claim is realised, the subject matter of the pledge needs to be auctioned and sold according to law and other ways to receive priority compensation. Therefore, whether the new varieties of plants have assessability is the key to become the object of pledge financing. At present, China has not formed a unified assessment system for the pledge financing of intellectual property rights. The pledge of new plant variety rights has become the "bloodline" of the pledge financing of seed industry enterprises, and the determination of the value of the pledge of new plant variety rights is complicated in itself, due to the lack of unified guidelines for the pledge of new plant variety rights. The lack of a corresponding assessment and supervision system for the

realisation of pledge financing further affects the potential economic value of new plant varieties. In addition, the participation of bank professionals, experts from seed management departments, heads of large and medium-sized enterprises in the seed industry and professional appraisers is indispensable to ensure the reliability and scientificity of the appraisal. In order to promote the development of pledge financing for new plant variety rights, the establishment of a unified, authoritative and scientific appraisal organisation is imminent.

### **3.2.3. Higher Risk of Pledge Financing for New Plant Variety Rights**

With the trend of internationalisation of intellectual property rights in the world, the development of intellectual property rights has a pivotal position in the economy of various countries, and changing the traditional way of using intellectual property rights, exploring the pledge financing of intellectual property rights, enriching the theory of intellectual property rights, and giving full play to the value of intellectual property rights have become an important force in the future international economic competition. [10]For the intangible property right of new plant variety right, there are high risks in pledge financing, and it is the existence of these risks that makes financial institutions worry more, and plays a certain role in hindering the financing development of seed industry enterprises. As a new financing method, new plant varieties have certain risks, for example, the market value of varieties, research and development costs, the existence of infringement factors will make the seed industry enterprise financing is relatively difficult. In addition, as a new financing method, the development of new plant variety right is immature and the system is not perfect, so it cannot respond to the problems in financing in time. As an intangible property right, pledge financing has the disadvantage compared with real estate pledge financing, plus the market risk, information asymmetry risk, enterprise management and other risks of new plant variety rights in the financing process. In order to promote the development of pledge financing of new plant variety rights, at the macro level, the state needs to formulate a series of measures to address specific risks. At the micro level, enterprises and financial institutions involved in the pledge financing of new plant variety rights need to make detailed provisions on the subtle problems arising in the financing process.

### **3.2.4. Limited Realisation Channels for Pledging New Plant Variety Rights**

New plant variety rights as intellectual property rights pledge financing in the realisation channel faces the plight of pledge realisation, which is mainly manifested in the following: first, the realisation of the main body. In the face of intangible intellectual property rights, it is difficult to realise, low realisation and limited disposal channels. Due to the limited nature of the transferee group, the transaction value is difficult to play, and can not find a qualified buyer in time, the limited subject of the transaction, making it difficult to realise the right to new varieties of plants or difficult to realise in accordance with the reasonable value, resulting in the commercial bank's pledge can not be realised. [11]Due to various reasons, the subject matter cannot be traded, it is difficult to realise, or the value is assessed to be too low, the consequences of the pledge right will not be realised. The subject matter disposal channel is not smooth, the pledge can not be effectively controlled, easily lead to the deterioration of bank credit. [12]Secondly, the realisation of the pledge of new plant variety rights is a non-litigation procedure, and the realisation procedure is stipulated in a more abstract way. The realisation of the security right is not subject to substantive review, and the court makes a judgement on the realisation method, which is to a certain extent not conducive to the realisation of the pledge right and cannot fully protect the interests of the pledgee. Thirdly, the realisation platform is not sound. In order to ensure the smooth progress of pledge financing of new plant variety rights, it is necessary to guarantee the realisation of the pledge right and establish a perfect realisation platform as soon as possible.

## 4. Suggestions for Improving Pledge Financing of New Plant Breeder's Rights

### 4.1. Determination of the Scope of Objects for Pledge Financing of New Plant Variety Rights

As far as new plant variety rights are concerned, the determination of the scope of objects available for pledge financing is complex, taking into account both their common characteristics as an intellectual property right and their own particularities. Generally speaking, the condition that a new plant variety right can be subject to pledge financing lies in the fact that it is a property right, and that the right is free from disputes over ownership and has quantifiable value. The object of pledge financing of new plant variety right is new plant variety right, in the process of pledge financing of new plant variety right, the pledgor can use this property right as a guarantee for the claim, and during the period of guarantee, if the debtor fails to pay the due debt, the pledgor can get priority compensation according to the realisation of its right. Therefore, the discussion of the new plant variety right pledge financing object should start from the study of the qualifying elements of the right pledge. According to the provisions of Article 440 of the Civil Code of China on the pledge of rights, the rights as the object of the pledge shall have the following elements: firstly, it must be a property right other than the ownership right, secondly, it must be alienable property, and thirdly, it must not be a property right that is not suitable for encumbrance.

### 4.2. Sound Assessment of Pledge Financing for New Plant Variety Rights

In order to do a good job in the assessment of the value of new plant varieties, the following three conditions must be met: firstly, there must be a practical system for the assessment of the value of plant variety rights, and it can be said that the assessment system is a comprehensive assessment system integrating biology, data, law, etc., and only in this way will it be operative in the implementation on the ground; secondly, there must be a professional assessment team consisting of experts in the breeding and seed industry entrepreneurs, and the professional assessment team should always maintain an objective, impartial and neutral attitude, and effectively conduct the assessment according to the supporting materials provided by the applicant. Secondly, there should always be a professional evaluation team composed of breeding experts and seed industry entrepreneurs, etc. The evaluation team should always maintain a neutral attitude of objectivity and fairness, and conduct the evaluation according to the supporting materials provided by the applicant. Finally, several on-site observations and other field inspections are needed. New plant varieties can only realise their R&D purpose and reflect R&D benefits in actual use, and the relevant responses of some new varieties may not be comprehensive and specific due to sampling and centralised planting in R&D and testing, and the performances of new varieties may differ in different geographical areas and environments at different times, so even if the new varieties have achieved national or provincial level recognition, the new varieties should be evaluated according to the supporting materials provided by the applicants. Therefore, even if a new variety has obtained national or provincial validation, and even if a new variety has obtained the authorisation of the right to new plant varieties, it is still necessary to carry out large-scale, long-time, and multi-location experiments and inspections, in order to better confirm and grasp the characteristics of the new variety's own development. However, in fact, China still lacks a perfect intellectual property appraisal system, lacks unified standards and rules, and has not formed a systematic, standardised and standardised appraisal system, which may not be able to scientifically and comprehensively assess the value of intellectual property rights of a property nature such as new plant variety rights. [13] Therefore, it is necessary to establish a perfect appraisal system for the value of new

plant variety rights in terms of appraisal methods, appraisal institutions, appraisers and market construction.

### 4.3. Risk Prevention Measures for Pledge Financing of New Plant Variety Rights

The application of intellectual property rights is the final point of the intellectual property system. Effective application can bring benefits to the right holder, encourage innovation and form a virtuous circle. The use of new plant variety rights will bring great benefits to seed industry enterprises, which can promote the productisation, commercialisation and commercialisation of new plant variety rights, and accelerate the transformation of the wealth of new plant variety rights. However, when transforming the achievements, it is inevitable to encounter various risks, especially the transformation of intangible intellectual property rights such as new plant varieties, and the risks of the pledge of new plant varieties, such as the risk of depreciation and infringement in the process of pledge, which will bring certain difficulties to the enterprises of pledge financing of new plant varieties, and at the same time, it will bring great risks to the realisation of the bank's claims. In order to ensure the success of the pledge of new plant variety rights, in the face of the risk of devaluation of the pledge, the enterprise can take a variety of intellectual property rights to make a pooled pledge to provide guarantee for the pledge of new plant variety rights; in the face of the risk of infringement, the enterprise can raise the awareness of property rights protection from itself, seek legal or administrative and judicial protection, form the all-round protection of the society, prevent the infringement risk, and realise the successful financing of new plant variety rights. The new plant variety rights can be successfully financed.

In recent years, the State has introduced relevant policies and incentives to encourage the research and development of intellectual property. Due to the late start of intellectual property pledge financing in China and the imperfection of relevant policies, there are a large number of risks. In order to promote the development of science and technology-based enterprises, broaden financing channels, accelerate the transformation of scientific and technological achievements, and improve the value of intellectual property use. As one of the new type of intellectual property object, new plant variety right has external risk when pledging financing. At the same time, as intangible intellectual property rights, new plant variety rights face a series of risks in pledge financing, but finance is the blood of the economy, and financial services are an important engine to promote the development of modern seed industry. In the face of the problems of pledge financing of new plant variety rights, in order to promote the financing difficulties of seed companies in the predicament, and to solve the external risks of pledge financing of new plant variety rights, a risk compensation fund mechanism led by the government will be further set up to resolve the risks of the market of pledge financing of new plant variety rights; and to strengthen the alliance of banks and enterprises, and to reduce the risk of asymmetry of the information provided by enterprises in the pledge financing of new plant variety rights.

China strongly supports the development and application of intellectual property rights, and new plant variety rights, as the object of intellectual property rights, should be the object of pledge financing. However, some risks cannot be avoided in the pledge financing enterprise of new plant variety rights, especially the internal operation of the enterprise and the new variety rights of the research and development of the management of the mistakes, the new plant variety rights of the pledge financing enterprise caused potential risks, so that the bank of the new plant variety rights of the pledge financing enterprise has doubts. For the above internal risks, we can improve the relevant measures to further alleviate the management risks and increase the confidence of banks in financing. By introducing insurance institutions and setting up plant variety right type insurance, we can share the operational risks of plant variety right

pledge financing; strengthen the internal management of plant variety right pledge enterprises and improve relevant measures to ease the difficulty of financing and promote the development of enterprises.

#### 4.4. Realisation of Pledges in Pledge Financing of New Plant Variety Rights

In order to solve the dilemma of realising the pledge right in the realisation channels of pledge financing of new plant variety rights as intellectual property rights: firstly, to establish a unified registration system for pledge financing of new plant variety rights, and to strengthen the organisational safeguards for pledge financing of new plant variety rights, so as to ensure the realisation of the pledge right in pledge financing of new plant variety rights. Secondly, optimise the procedure for the realization of pledge financing of new plant variety rights. To build an efficient and professional litigation system for the realisation of pledge financing of new plant variety rights; to strengthen the construction of the court system of new plant variety rights and the construction of the trial team of new plant variety rights, so as to establish and improve the special procedures in line with the law of trial of new plant variety rights; to establish and improve the mechanism of social honesty and integrity, to reduce the cost of value assessment and litigation, and to improve the quality of new plant varieties, so as to effectively solve the difficulty of the realisation of the implementation of the right to pledge of new plant varieties rights. Thirdly, the establishment of a sound social integrity mechanism to improve the quality of new plant varieties. Thirdly, improve the trading platform for pledge financing of new plant variety rights. The government should give full play to its role as a social public service provider, establish a public service platform for big data information on new plant variety rights, and improve the value assessment system of new plant variety rights, so as to build a government-led, multi-participation, interconnected and shared public service system.

### 5. Conclusion

In modern agricultural production, the development of new plant varieties is a key competitiveness driver. New plant varieties are the unique intellectual property rights of seed industry enterprises, which are known as the patents of agronomy. However, in view of the high cost and long cycle of variety development, research and development organisations are inevitably subjected to huge financial pressures, and thus pledge financing for new plant varieties rights comes into being. As a new type of financing and guarantee channel, it provides necessary financial support for researchers and developers with the help of the pledge function of intellectual property rights, and is able to alleviate the financing difficulties of seed enterprises to a large extent, which is of far-reaching significance to the innovation and development of the agricultural field.

### Acknowledgments

This work was financially supported by The National Social Science Fund of China (Grant No. 22FFXB055).

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- [2] Article 8 of The Regulations on the Protection of New Plant Varieties: "Where an application right or variety right is transferred, the parties concerned shall conclude a written contract, register it with the State Forestry Administration and have it published. The transfer of the application right or variety right shall take effect from the date of registration."

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