

# **CHAPTER- 7**

## **Conclusion and Suggestions**

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## 7.1 Conclusion

India is a leader in developing countries and is at the forefront of international negotiations to ensure the protection of farmers. The Indian situation contains more important lessons for the realization of farmers' rights. The number of reasons can be interpreted for its importance like firstly India leads the creation of a legal framework for farmers' rights, secondly its international contribution to the negotiations on farmers' rights and thirdly the complexity of Indian agriculture in which the country tries to implement these rights. Researcher has discussed the Rights of the farmer in relation to the Seed, as seed playing the important role in the life of the farmer as to startup link with the occupation. To regulate the seed sector the Seed Act, 1966 has being enacted but due to the recent innovations in the seed sector the first Bill was introduced in 2004 and the last came in 2014 but still the Bill is in the pending condition.

For this research work the researcher intended to conduct a research on Rights of Farmers with Reference to IPR and Laws Relating to the Seed in India. This research has been conducted with following objectives:

- To analyze Nagoya Protocol on Access and Benefit sharing approaches towards protecting the interest of indigenous farmers in traditional knowledge.
- To study the effect of Intellectual Property Rights on rights of farmers.
- To analyze the existing laws pertaining to the seed in India.
- To examine the Seed Bills with reference to farmer rights relating to seed.
- To examine the effect of genetically modified seed on Indian farmers.

The researcher to achieve the above mentioned objectives of the study, studied initially the basic of Genesis of Genetically Modified Crops and Traditional Knowledge with international and national perspective in **Chapter Two**. The researcher made an attempt in this chapter to understand the concept of traditional knowledge and Genetic Engineering so that it becomes easier to analyse the law in later chapters. While studying the historical evolution of Traditional Knowledge and Genetic Modification, researcher could conclude that traditional knowledge has its origin traced long back were the farmers were the owner of the seeds and they had Access and Benefit sharing but after coming of the Genetic Modification

the scenario had gradually changed. The researcher also discussed about the genesis of GM crops, the advantages and disadvantages of them with the situation in countries such as United States, Canada and Europe. The researcher also discussed the legal aspects/legal protection to traditional knowledge and how they are protected under Nagoya Protocol benefit sharing in the above mentioned countries.

Thus, the second part of the **objective No.1** of the research ‘**to analyze Nagoya Protocol on Access and Benefit sharing approaches towards protecting the interest of indigenous farmers in traditional knowledge.**’ was achieved by the researcher.

The researcher in the next **Chapter Three** titled ‘**Laws of the Seed: An Analysis**’ studied and analysed the laws relating to seed in India which was mentioned in **objective No. 3** of this research ‘**To analyze the existing laws pertaining to the seed in India**’ and first half of **objective No. 4** of this research ‘**To examine the Seed Bills with reference to farmer rights relating to seed.**’ ‘The researcher also studied and analysed the existing law .i.e. Seed Act, 1966 and the pending Seed Bill 2004, 2010, 2011, 2014. The researcher analysed the history of the Seed Act 1966 and also the reason for forming of the central legislation for maintaining the quality of the seed and to uplift the quality of the seeds. Further, the Act provides for a mechanism for fixing the minimum standards for quality, germination, purity, etc. Also discussed various rules related to the Seed. Researcher has tried to analyse and discuss various issues and concerns of pending Seed Bills.

The researcher in **Chapter Four**, titled ‘**Rights of Farmers**’ studied the concept of Farmers rights. The researcher also studied the present laws and legislations dealing with the Rights of Farmers which was mentioned in the **objective No.2** of this research ‘**To study the effect of Intellectual Property Rights on rights of farmers**’, the second half of the **objective No. 4** of this research ‘**To examine the Seed Bills with reference to farmer rights relating to seed**’ and the first part of the **objective No.1** of the research ‘**to analyze Nagoya Protocol on Access and Benefit sharing approaches towards protecting the interest of indigenous farmers in traditional knowledge**’ was achieved by the researcher. The

Researcher has divided this chapter in two portions as has national and international perspective and aimed to find some of the rights which are identified as farmers' right. First portion of the chapter discusses about the evolution of the concept of the farmers rights whereas second portion deals with the international perspective which covers the provision of UPOV that aims to provide and promote an effective plant variety protection system to encourage the development of new plant varieties in the interest of society. UPOV states that plant breeding by breeders of new plant varieties is an intellectual property right and obtains defence that the breeder's needs to submit single proof of his developed variety. The UPOV Convention mainly states the principle that UPOV members must change plant breeding by offering breeders of new plant varieties an intellectual property right. However, the ITPGRFA talked about the farmers role as the custodians and the innovators which was found missing in the UPOV Convention.

The Convention on Biological Diversity (CBD) is the world community's response to preserving the ecological foundations of organic production by preserving biodiversity. CBD has two supplementary agreements - Cartagena Protocol and Nagoya Protocol which majorly focuses the movements of living modified organisms (LMOs) resulting from modern biotechnology and the other focuses on the sustainable use and the fair and equitable sharing of Benefits from the Genetic Resources. The benefit sharing was ultimately aimed in the Nagoya Protocol under the CBD for the protection of the Traditional Knowledge and farmers Rights for the farmers as the end users. The basic scope of Nagoya Protocol applies to genetic resources that are covered by the CBD, and to the benefits arising from their utilization. The Protocol also covers traditional knowledge associated with genetic resources that are covered by the CBD and the benefits arising from its utilization. It also provides a transparent legal framework for the implementation of one of the three objectives of the CBD .i.e. the fair and equitable sharing of benefits arising out of the utilization of genetic resources. It is intended to create greater legal certainty and transparency for both providers and users of genetic resources by

- establishing more predictable conditions for access to genetic resources
- helping to ensure benefit-sharing when genetic resources leave the contracting party providing the genetic resources.

Third portion discusses about the Indian perspective of the farmers, where the researcher aimed to find some of the rights which are identify as farmers' right and other as the breeder rights as both are different when it comes to Indian Laws and discussed PPVFR Act, 2001 identified various rights given to the farmers. The PPVFR Act focuses on all categories of plants and its varieties which can be protected by the farmers and breeders under this Act. Therefore, the Indian PPVFR Act, 2001 complies with TRIPS, CBD and UPOV. Thus PPVFR Act 2001 comprises the feature of UPOV and sets up the minimum standards for Plant Breeders Right protecting the contracting countries. The first portion is on the rights of farmers to retain part of the harvest for following planting as Seed. The second exception allows breeders to make use of a protected variety in consequent breeding experiments and the result of which meet the criteria for protection under definite environment.

For protecting the biodiversity and access to benefit sharing India has the Biological Diversity Act, 2002 which is the pioneering piece of the legislation. The Act mainly focuses on the sustainable use of its components and fair and equitable sharing of the benefits arising out of utilization of genetic resources. So the right of Seed should be the basic right of the farmer or the breeder has altogether different perspective in the different countries.

The researcher after analysing various laws under **chapter three 'Laws of the Seed: An Analysis'** and **chapter four 'Rights of Farmers'** has found the following lacunas:

- The proposed Bill is to regulate the quality of seed for sale, import and export and to facilitate production and supply of quality seeds; however, nowhere does the Bill define what quality seed is.
- The proposed Bill does not have lacks the provisions relating to regulating seed price.
- The proposed Bill does not seem to be in agreement with the Protection of Plant Varieties and Farmers' Rights (PPVFR) Act, 2001.
- Farmers can claim compensation under Consumer Protection Act, 1986 for the legally bought registered varieties. Compensation for underperformance of

seeds will be governed by consumer courts. This provision is unlike the PPVFR Act, which allows compensation to be decided by the Authority established under that Act.

- Seed Bill does not require the declaration of origin of variety along with pedigree details whereas PPVFR Act requires the declaration of origin of variety along with pedigree details.
- PPVFR Act rewards for farmers contribution and also the benefit sharing whereas Seed Bill doesn't grant any such thing.
- Seed Bill does not provide seed dealers any obligation to provide reasonable seed supply to farmers but PPVFR Act Provides compulsory licensing which safeguards the interests of farming community to ensure adequate seed supply at reasonable price on the Government.
- Seed Bill grants the provisional registration which is considered as major drawback whereas as no such provisions are given under PPVFR Act, 2001.
- The present Bill also fails in putting the effective mechanism to deal with the compensation cases of the farmers in case of failure.

Hence, it can be concluded that the present pending Seed Bill and the PPVFR Act, 2001 has some defects and gaps which can be possibly resolved by adopting a well comprehensive legislation, which is definitely the need of time.

The researcher in **Chapter five**, titled '**Judicial Approach**' has studied and analysed several national and international judgments in order to determine the actual status of the various laws and regulations relating to IPR, Seed Law and Farmers Rights. The inferences that were drawn are as follows:

### **Summary of Inferences that can be drawn after the analysis of the cases:**

The researcher in order to analyse the development of laws on IPR, Seed Law and Farmers Rights analysed some national and international landmark judgments in Seven parts, India, TRIPs Agreement and Supreme Court, Plants, GM Crops and Patentability, Patent Exhaustion, Definition of Seed, Liability of failure of Seeds: Is the Consumer Court Competent Redressal Authority, Sale of GM Seeds and Farmers Rights. The researcher could make the following inference:

- The international debate on the role of the biotechnology in the agriculture all started with the grant of patent by United States Supreme Court and the other by the Board of Patent Appeals where in the first microorganisms were given patent and in the next utility patent protection for sexually reproduced plants specially corn varieties was given which actually triggered the debate.
- The Issues relating to patentability of GM Crops and various plant varieties was discussed and decided by various courts in different cases nationally and internationally. Judgements related to the PPVFR Act and the Patent Act were also dealt with.
- The Judgement relating to the Doctrine of Exhaustion or First Sale Doctrine was dealt with that how patent exhaustion doctrine does not allow the making of additional copies of the original item except as allowed by the patent holder's license.

Then, the researcher analyzed the cases dealt with the definition of the seed, Liability of failure of Seeds: Is the Consumer Court Competent Redressal Authority, Sale of GM Seeds and Farmers Rights.

- The land mark judgement was found on the differentiating issue of the wheat as a Seed or a Grain, where it was interpreted through the definition of seed given under section 2(11) of the Seed Act 1966.
- Is the farmer a consumer under the Consumer protection Act, 1986 was raised in the landmark case and whether Consumer Courts are Competent Redressal Authority for seeking the relief, and there is no reason to deny them the remedies which are available to other consumers of goods and services.
- The sale of GM seed was allowed in the landmark judgement by United States were instead of contamination claimed by organic seed growers.



- The landmark judgment states the various rights available to the farmers nationally and internationally.

At the end of the analysis made by the researcher in this chapter, it can be well assumed that the farmers are given rights relating to the seed in the various judgements nationally and internationally. But there definitely needs some changes and improvements to achieve a more subtle way for determining the liabilities to provide remedies in the form of compensation to the farmers for the low quality of seed and for the failure of the seed, which is a sign of a developed legal framework of any modern country. The researcher suggest there should be appropriate changes for the provisions of registration of seeds and varieties, recommends the system of licensing instead of registration and also recommends for decentralization of powers between the Centre and the States for effective implementation of the provisions of the Bill.

The researcher had used non doctrinal method for **Objective no. 5** of this research **‘To examine the effect of genetically modified seed on Indian farmers’** to meet this end the researcher used semi structured questionnaire which was filled in by farmers of Vadodara district. The data collected from **one hundred (100)** respondents were analysed and interpreted in **Chapter Six: Data Analysis and Data Interpretation** of this research work. Some of the important inferences drawn in that chapter are listed below:

- 90% of the farmer responded that they are not aware about laws relating to seed in Vadodara district
- All 100% farmers gave their first preference to the cotton crops for cultivation.
- 64% respondents use GM seeds for crop cultivation.
- 12% use the saved seeds for cultivation.
- 25 % of farmers have been using GM seeds More than 5 years while 75% farmers have started using GM Seeds in the last 5 years.
- Out of the respondents using Gm seeds 89% said that they are not aware about the effect of GM seed on land.
- 89% of the farmers were unaware they don't know whether GM Seed degrading the quality of their soil.

- 34% of farmers out of 64 farmers get upto Six quintal yield on one Vigah from one packet of seeds, 18 % of farmers got seven quintal yield, 15% farmers got around 8quintal yield, 12% got five quintal of yield, 10% have got 4 quintal and 7% of farmers got three quintals of yield per Vigah using one packet of GM Seeds.
- Maximum farmers rejected the preposition of compulsory registrations of seeds
- Maximum farmers were not in favor of government making the use of GM seed compulsory and completely bans the use of saved seeds, is it good idea.

### **7.1.1 Conclusions drawn on the Hypothesis**

Lastly, on the basis of the above discussion and inferences the researcher has drawn conclusions on the **Hypothesis** of this research work as follows:

- **Hypothesis No. 1:** Was the existence of Nagoya Protocol call of time or international regulatory framework imposed by the developed countries?

**The said Hypothesis has been affirmed by the inferences drawn in this research study.**

- **Hypothesis No. 2:** Are patented seeds creating war with the nature which is going to affect the biodiversity in long run?

**The said Hypothesis has been affirmed by the inferences drawn in this research study.**

- **Hypothesis No. 3:** Does Benefit sharing as envisaged under the current Seed Bills contribute to strengthening the rights of farmers or offers only financial compensation?

**The said Hypothesis has been affirmed by the inferences drawn in this research study.**

- **Hypothesis No. 4:** Does some provisions of the Seeds Bills contradict and overlap with the Protection of Plant Varieties and Farmers' Rights Act, 2001 (PPVFR Act).

**The said Hypothesis has been affirmed by the inferences drawn in this research study.**

- **Hypothesis No. 5:** Can this Seed Bill in its present form protect farmers from exploitative pricing or hoarding of seeds?

**The said Hypothesis has been negated by the inferences drawn in this research study.**

- **Hypothesis No. 6:** Is relationship between Genetic Resources, Traditional Knowledge and Intellectual Property Rights the most controversial agenda items in the negotiations of several international organizations?

**The said Hypothesis has been affirmed by the inferences drawn in this research study.**

## **7.2 Suggestions**

On the basis of the study conducted, the Researcher has to submit the following Suggestion

### **Seed and Traditional Knowledge**

Traditional knowledge about seed should be associated with modern techniques to protect and uphold traditional rights over seed under Seed Bills.

### **Farmers' Rights and Price Regulation**

Representatives of the farmers should be included in the State and Centre. To protect the rights of the Farmers definite provision of regulating the seed price should be enacted. A State Committee must be made with the powers to collect the relevant data and review the seed prices and to be sold only after their approval. Even the Central government should be given a power to make a seed price control system for dealing with several aspects for regulation of prices by fixing a maximum retail price.

### **Seed Registration**

There needs to be consistency between the PPVFR Act, 2001 and any new Seed Bills. This will enable the seed producer not to disclose the details of the seed and get it registered under the Seeds Act thereby bypass the benefit sharing with those who have actually evolved/ conserved the variety. This needs to be corrected and made consistent.

The provisions under PPVFR Act, 2001 provides for the validity of registration for nine years in case of trees and vines and six years in case of other crops. This could be renewed subject to the protection period not exceeding 18 years in case of trees and vines and 15 years in case of other crops. This need to be made consistent with any new Seed Bill, if at all legislated.

### **Compulsory Licensing**

It would be logical if the registration of seed is linked to varieties protected under the PPVFR Act, 2001. In the absence of such coordination, there will be room for unscrupulous seed producers/dealers to get useful seeds registered through the route of the Seeds Bill 2011, without sharing the benefits, as provided under the PPVFRA, with those who make efforts in evolving and conserving plant genetic resources.

### **Certification of Seeds**

It is suggested that the private participation into the Seed testing and seed certification should be discouraged as it may lead to the encouraging spurious seed in the market.

### **Farmers' Courts**

It is suggested that simple Quasi-judicial mechanism such as Farmer Courts should be set up to address the farmer's grievances such as liability clause in case of failure of crop.

### **Seed Failure and Redressal Mechanism**

Also, in case of failure of seed the suitable mechanism to estimate and deliver adequate compensation should also be defined. The Panchayats at the village

level should be given the free hand for fixing the compensation and value of the expected yield and cost of the cultivation which are the essential factors for fixing the compensation.

Also, it is suggested that a speedy and efficient compensation mechanism should be at every District level.

### **Power of Seed Inspectors**

Further, the power to the seed inspector should be given to access the working of the panchayats.

### **Awareness about Farmers' Rights**

The District Service Legal Authority must be entrusted the duty of creating awareness about the rights of the farmers and should be provided with legal assistance, whenever required.

### **GM Seeds and the Law**

It is suggested that Uniformity in laws relating to the use of GM Seeds should be there and any new Seed Bill should have specific provisions on GM seeds.

### **Compulsory Training**

Compulsory training should be given by the Seed sellers and breeders to the farmers for growing and harvesting the seed to save guard the interest of the farmers and to protect the overall national agriculture.

### **Need for Uniformity and Consistency**

It is further suggested that instead of bringing a new Seed law, necessary changes should be made in the existing PPVFR Act and the Seed Act 1966. In the alternative, the researcher suggests, that if the New Act on Seed is to be enacted then it should be looked in unification with other legislations like PVPFR Act, 2001, Biological Diversity Act, 2001, Environmental Protection Act, 1986, Essential Commodities Act, 1955 etc.

Lastly, the researcher ends this research work with the following words:

*“Affirming that the past, present and future contributions of farmers in all regions of the world, particularly those in centres of origin and diversity, in conserving, improving and making available these resources, is the basis of Farmers' Rights”*

*Preamble, ITPGRFA*