The Protection of New Plant Varieties under Korean Patent Law  
--Compared with Seed Industry Law  
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I. Introduction

The Republic of Korea has been a WTO (World Trade Organization) member since 1 January, 1995. Among the WTO agreements, the Trade Related Aspects of the Intellectual Property System (TRIPS) agreement requires member states to provide patent protection for all fields of technology. Although Articles 27.3 (b) of the TRIPS allows governments to exclude some kinds of inventions from patenting, this provision still requires all member states to provide intellectual property protection either patents or an effective sui generis system or both for plant varieties.

Under the current legal system of the Republic of Korea, both forms of protection are


3. TRIPS Article 27: Patentable Subject Matter 3. “Members may also exclude from patentability: (b) plants and animals other than micro-organisms, and essentially biological processes for the production of plants or animals other than non-biological and microbiological processes. However, Members shall provide for the protection of plant varieties either by patents or by an effective sui generis system or by any combination thereof…”

4. No definition of an “effective sui generis system” was given, yet prospective member states were required to put such systems in place by the end of 1999 if they chose this as an alternative to patenting and if they wished to avoid punitive trade sanctions. See at http://www.wto.org/english/tratop_e/trips_e/art27_3b_background_e.htm.
available for the protection of new plant varieties under the Patent Law and under the Seed Industry Law, respectively. This ebrief explains the Korean system, focusing on intellectual property rights in plants by comparing a patent granted pursuant to the Patent Law with a 'variety protection right' under the Seed Industry Law.  

II. An Overview of Korean Patent Law

Korean patent law, one of the industrial property laws, dates from 1961 and was last amended in December 11, 2002. The law is designed to encourage, protect and utilize inventions, thereby improving and developing technology, and contributing to the development of industry. Pursuant to this law, namely “Patent Act” (PA, hereafter), an invention is protected upon the grant of a patent by Korean Intellectual Property Office (KIPO), the implementing agency.

Under PA, “invention” is defined as “the highly advanced creation of technical ideas utilizing rules of nature.” For a patent to be registered under the Patent Law, therefore, it must fall under this definition. Those simply mentioning an evidence of natural law as such will not be considered an invention because it cannot be regarded as “highly advanced.” Neither will discoveries of a natural substance, bacteria nor natural phenomenon be recognized as an

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7 PA Art. 1.

8 Id. Art. 2.
invention for the same reason.

In addition, inventions being contrary to natural laws (natural laws such as the law of universal gravitation, or the laws of preservation of energy) or inventions in which natural laws are not utilized are not recognized as “invention” under PA. For example, inventions based on mathematical formula or human mental activities do not utilize natural laws and, therefore, are not patentable.\(^9\)

Once the definitional criteria are met, there are three requirements for an invention to be patentable: industrial applicability, novelty, and inventive step.

First, an invention shall be industrially applicable.\(^{10}\) Here, the word “industry” is interpreted in a broad sense, including mining, agriculture, fishery, transportation, telecommunication, etc., as well as manufacturing.\(^{11}\) If an invention is considered not capable of being used or applied in any of such areas, it will be excluded from patent protection. For example, methods for treatment of human body by surgery or therapy and diagnostic methods practiced on the human body are not patentable due to lack of industrial applicability. By contrast, a medicine, a medical apparatus, or a medical instrument is patentable.

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\(^9\) For more explanation and examples regarding “inventions contrary to the natural law” see at http://www.jpo.go.jp/iken_e/pdf/feedback_121102_1.pdf (p. 9).

\(^{10}\) PA Article 29 (1) “inventions which have \textbf{industrial applications} may be patentable...”

\(^{11}\) However, it does not include banking, insurance, or medical business. See at http://inventer.co.kr/idea.html (translated by author).
Moreover, commercially or practically inapplicable inventions are not considered industrially applicable.\textsuperscript{12} While an invention which concerns marketable or tradable subject matter is considered commercially applicable, an invention applied only for personal use, such as a method for smoking, or an invention applied only for academic or experimental purposes are not. Also, even if it works theoretically, if an invention cannot work practically, it lacks industrial applicability.

Second, an invention shall be unpatentable due to lack of novelty in case that: i) the invention was known or worked publicly in the Republic of Korea before the filing date (or, if two or more applications relating to the same invention are filed on different dates, first-to-file rule shall apply under Article 36 of PA.); or ii) the invention was described in a publication distributed inside or outside of the Republic of Korea before the filing date (or the priority date if claimed); or iii) the invention was available to the public before the filing date (or the priority date if claimed) through an electrical communication network including an internet server maintained by a governmental office, public university, or public laboratory.\textsuperscript{13}

\textsuperscript{12} Guide to patent \url{http://www.geocities.com/Tokyo/3015/patent.html#Requirement2}.

\textsuperscript{13} PA Article 29 [Requirements for patents] (1) Inventions which are industrially applicable may be patentable unless they fall under any of the following subparagraphs:

\begin{itemize}
\item (■) the invention was publicly known or worked in the Republic of Korea before the filing of the patent application; or
\item (■) the invention was described in a publication distributed in the Republic of Korea or in a foreign country before the filing of the patent application, or inventions published through electric telecommunication lines as prescribed by Presidential Decree.
\end{itemize}

See also at \url{http://www.hanyanglaw.com/resource/faq.html#5}.  

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However, Article 30 of PA\textsuperscript{14} provides for exceptional treatment of lack of novelty; even if the invention lost its novelty because of such public disclosure before filing, it shall still be recognized to be novel if the patent applicant's act is deemed to fall under one of the subparagraphs of Article 30 (1) of PA, as long as the application is filed within six months of the disclosure.

Third, the criterion of inventive step prohibits the patenting of any invention which could be invented easily by a person having ordinary skill in the art, based on invention(s) publicly known or worked in the Republic of Korea or disclosed in a publication distributed anywhere in the world prior to application.\textsuperscript{15} Thus, an invention shall be considered as involving an inventive step if it is not predictable.

\textsuperscript{14} Id., Article 30 [Inventions Deemed to be Novel] (1) “If a patentable invention falls under any of the following subparagraphs, it shall be recognized to be novel provided that the patent application therefor is filed within six months of the applicable date:

(i) when a person having the right to obtain a patent has caused his invention to fall within the terms of any of the subparagraphs in Article 29(1) by conducting an experiment on it, publishing the invention in printed matter, or presenting it in writing at an academic meeting held by an academic organization;
(ii) when, against the intention of the person having the right to obtain a patent, the invention falls within the terms of any of the subparagraphs in Article 29(1); or
(iii) when a person having the right to obtain a patent has caused his invention to fall within the terms of any of the subparagraphs of Article 29(1) by displaying his invention at an exhibition which satisfies any of the following requirements:

(a) exhibitions held by the Governor or a local governmental entity;
(b) exhibitions held by persons authorized by the Government or a local governmental entity;
(c) exhibitions held in a foreign country with the authorization of the government; or
(d) exhibitions held in the territory of a country party to a treaty by the government of the said country or by persons authorized by the said government.”

\textsuperscript{15} Id. Article 29 [Requirements for Patent Registration] (2) “Notwithstanding the paragraph (1), where the invention referred to in each subparagraph (1) could easily have been made before the filing of a patent application by a person with ordinary skill in the art to which the invention pertains, the patent for such an invention may not be granted.”
step if, having regard to the state of the art, it is not obvious to a person skilled in the art. In relation to plant-related inventions in particular, the inventive step requirement is assessed based on the main characteristics of the subject matter. For example, if the new plant variety is for food-esculent characteristics such as nutrition facts shall be the central factors. If it is medicinal, on the other hand, the content of medical effect or quantity in each relevant element shall determine whether it has inventive step or not. Likewise, in case of an ornamental plant, the critical characteristics shall be its color, shape, etc.  

Finally, in addition to meeting the three requirements, the invention must not fall within the categories of “unpatentable inventions.” “Unpatentable inventions” are those inventions which are “liable to contravene public order or morality or to injure public health.” For instance, inventions of substances to be produced by nuclear transformation cannot be patented regardless whether other requirements above mentioned are met or not, for such inventions are liable to contravene public health.

With regard to the plant-related inventions, the following four categories are deemed to be unpatentable due to the potential harm in the nature of the inventions: (1) a plant-related invention that is likely to destroy the ecosystem; (2) a plant-related invention that is likely to

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17 PA Article 32 “Inventions liable to contravene public order or morality or to injure public health shall not be patentable, notwithstanding the provisions of Article 29(1) or (2).”
cause environmental pollution; (3) a plant-related invention that is likely to cause harm to human beings; and (4) a plant-related invention that is likely to be considered abhorrent.\(^{18}\)

III. Comparison between PA and Seed Industry Law (SIL)

a) Scope

Patents under PA and variety protection rights under SIL are two different forms of intellectual property right that have been developed to address different objects. The patent system covers inventions in all fields of technology, whereas the plant variety protection system under SIL has been specifically developed to cover plant varieties. Therefore, the two laws serve different purposes; while the goal of PA is industrial development, SIL aims at agricultural development. Nevertheless, they share one common objective--to provide an incentive for the development of innovative and useful products or processes.

According to Article 31 of PA, “any person who invents a variety of plant which reproduces itself asexually may obtain a plant patent” irrespective to their species. Thus, plant patents are available only for asexually reproduced plants-i.e. those varieties that support repetitious reproducibility under Korean patent system.\(^{19}\) This limited scope under PA in the republic of Korea resembles the coverage under Plant Patent Act of 1930 in the United States,


\(^{19}\) PA Article 31 Patent for Plant Inventions.
which also requires asexual reproduction as a prerequisite.\textsuperscript{20}

In comparison, Seed Industry Law (SIL) has a broader scope, extended to the entire plant variety regardless of sexual or asexual reproduction. Therefore, the subject matter of protection covered by patent system and by plant variety protection system is not exactly the same. As a result, a dual protection can be afforded for only those plants that are asexually produced in the Republic of Korea.

Although the coverage under PA is rather limited due to the requirement of repetitious reproducibility, it should be noted that PA protects methods of processing, breeding, improving, and cultivating plants, whereas the Seed Industry Law does not. As a result, certain areas of great interest such as DNA manipulation can only be protected under PA, for SIL protection covers solely new plant varieties, not the methods of any kind.\textsuperscript{21}

b) Requirements of Proof to obtain protection

The two laws also show discrepancy in conditions of protection and in examination. As discussed above, PA requires industrial applicability, novelty, and inventive step; however, SIL requires distinctness, uniformity, stability and a suitable denomination as well as novelty. In examining whether the subject matter meets the statutory requirements, PA requires only


documentary examination, while SIL requires field test as well.

c) Duration

Both patent rights and variety protection rights are time-limited monopoly rights. When the patent expires, is revoked or lapses, the monopolistic patent rights cease unless they are timely renewed. (While SIL does not provide for the extension of the rights, under PA patent rights can be once extended for as long as five years.22)

The period of protection under PA and SIL slightly differs. A patent is granted for 20 years from the date of filing of the complete patent application.23 Similarly, the SIL duration-20 years-is the same with respect to most plant varieties. However, plant variety protection right for trees and fruits, in specific, lasts 25 years.24

22 PA Art. 89. [Extension of Term of Patent Right] “Where authorization or registration under provisions of other laws or regulations must have been obtained in order to work a patented invention, and it has taken an extended period of time to complete the safety tests, etc., required in order to obtain such authorization or registration (hereinafter referred to as “authorization”) and the patented invention could not be worked for over two years as a result of such activities, notwithstanding Article 88(1), the term of the patent right may be extended by such period, not exceeding five years, during which the patented invention could not be worked as a result of such activities.”

23 PA Art. 88.

24 SIL Art. 56.
d) Enforcement-Legal Protection

In order to protect the owner of the patent or the protection right, both laws provide a variety of legal remedies. Under PA, a patentee requests a person who is infringing or is likely to infringe his right to discontinue or refrain from such infringement by demanding

“The destruction of the articles by which the act of infringement was committed (including the products obtained by the act of infringement in case of a process invention for manufacture a product),

“The removal of the facilities used for the act of infringement, or

“other measures necessary to prevent the infringement.”

If the alleged infringer continues such infringement, the patent owner may take any or all of the following actions: i) raise a trial for confirmation of claim scope before the Industrial Property Tribunal of KIPO; ii) bring an infringement suit for a provisional or permanent


26 PA Art. 126 [Injunction etc. against an Infringement]. Here, sending a warning notice prior to filing a suit is not required; however, the warning notice prevents the offender from denying the knowledge of the patent right, that is, the fact that bad faith exists as far as the infringement is concerned after the notice is sent. This is important especially when an infringed patent owner tries to file a criminal suit, because an offense based on negligence of patent infringement is not punishable under the Criminal Law. (Under the Civil Law, a negligent act consists of an unlawful act. Thus, it is possible for an infringed patent owner to bring a compensation suit against an infringer who does not know the existence of the relevant patent right, regardless of his bad faith, for the damages caused by the infringement.) See at http://eng.nampat.co.kr/newsletter/newsview.asp?fname=20031061023.xml.

27 PA Art. 135 [Trial to Confirm to Scope of a Patent Right] (1) “A patentee or an interested person may request a trial to confirm the scope of a patent right.”
injunction\(^{28}\) and/or damage;\(^{29}\) and iii) accuse the infringer of a crime under Article 225 of PA.\(^{30}\) Also, if a patent owner or its exclusive licensee loses his credit/reputation in business due to the infringement, the court may, upon his request, order the infringer to take other measures necessary for recovering the credit in business of the patent owner or its exclusive licensee.\(^{31}\) For example, as the method to recover the goodwill of the patent owner, an apology notice about infringing the reputation of the patent owner or its exclusive licensee can be placed in a daily newspaper.

SIL follows a similar pattern of methods of remedies. Chapter VI of SIL provides as broad coverage as PA does for both civil and criminal remedies to enforce the protection for the

\(^{28}\) PA Art. 126.

\(^{29}\) PA Art. 128 [Presumption etc., of the Amount of Damages] Here, PA provides two alternatives for the calculation of damages in infringement action. The first is the profit earned by the infringer as a result of the infringement (the presumption lies in this); and, the second is the amount that the patent owner would normally be entitled to receive for the working of the patented invention. Although no limits are placed on the amount that Korean courts may award as compensation for actual damages due to infringement, punitive damages and attorney’s fees are normally not compensated in the Republic of Korea. See Jay Yang, *Overview of Korean IP laws* at http://www.buildingipvalue.com/n_ap/397_399.html.

\(^{30}\) PA Art. 225 [Offense of Infringement] (1) “A person who infringes a patent right or exclusive license is liable to imprisonment with labor not exceeding seven years or to a fine not exceeding 100 million won.” Here, the criminal authorities do not initiate the investigation of a patent infringement without an accusation by the party whose patent is infringed since an offense of infringement of a patent right is subject to prosecution on personal complaint. Accordingly, in order to take criminal action against an infringer, an infringed patent owner should file a criminal accusation with a District Prosecutor/Police Office.

\(^{31}\) PA Art. 131 [Recovery of Reputation of Patentee, etc.] “Upon request of a patentee or exclusive licensee, the court may, in lieu of damages or in addition thereto, order the person who has injured the business reputation of the patentee or exclusive licensee by intentionally or by negligently infringing the patent right or exclusive license to take necessary measures to restore the business reputation of the said patentee or exclusive licensee.”

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plant variety right holders, such as injunction, damages, and recovery of credit/reputation. In comparison, however, SIL's imposition of criminal punishment is less severe, prescribing an infringement on the variety protection right as a penal offense, punishable by imprisonment for no more than five years or a fine not exceeding thirty million Won.

**e) Administrative Agencies**

Finally, the Korean Industrial Property Office (KIPO), located in Daejeon-Si, is the administrative agency for PA, specifically for plants through its division of agriculture, forestry, and fishery. KIPO is responsible for the intellectual property rights policies of the Korean government and is in charge of intellectual property administration, granting intellectual property rights and protection against infringement and helping them to be commercialized.

As for SIL, the National Seed Management Office (NSMO) has been set up as an implementing agency. It was established as National Seed Production and Distribution Office in 1974, and reorganized and renamed as National Seed Management Office in 1998. NSMO is a subsidiary organization under the Ministry of Agriculture and Forestry (MAF) in the Korean government. The headquarters of NSMO, located in Anyang-Si, have four divisions: General Service Division, Seed Marketing Division, Plan Variety Protection Division, and Variety Protection Division.

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32 SIL Art. 84 [Injunction and Prevention against infringement].

33 SIL Art. 86 [Right to Claim Compensation for Damages].

34 SIL Art. 88 [Recovery of Reputation of Variety Protection Right Holder or Exclusive Licensee].

35 SIL Art. 169(1).
IV. Conclusion

One seeking protection for a new plant variety under the current law of the Republic of Korea should consider two bodies of law: PA and SIL. While the former protects “asexually reproducible plant varieties” only, the latter protects plant varieties generally. The two laws are also slightly different from each other in light of requirements of proof to obtain the protection, duration of rights, and enforcement of the rights.