

**INTELLECTUAL PROPERTY RIGHTS
QUESTIONS & ANSWERS**

Why are intellectual property rights necessary for the seed industry?

Strong intellectual property protection allows developers of new plant varieties and improved seeds to be rewarded for their efforts. This promotes research and development, which ultimately enhances crop production and conservation of genetic resources. Research and development investments are generally long-term and require significant amounts of financial resources. In order to justify the size and scope of research spending necessary to develop new varieties, especially if genetically enhanced through modern techniques, companies must be able to recoup their original investment as well as make earnings on it. In addition, intellectual property protection underscores the phrase “good fences make good neighbors” by preventing duplication of research efforts. If breeders were all permitted to work with a small set of “popular” varieties, the germplasm base would be narrowed. Granting exclusive rights to specific varieties also gives a level of control to developers to enforce resistance management practices or other environmentally sound measures during their period of exclusivity.

What types of intellectual property protection are available in the United States?

Several types of intellectual property protection are available in the United States that allow an inventor to match the form of protection with the value of the invention. One type of protection is offered by trade secret, whereby the inventor does not publicly disclose any information about the invention, but the invention is subject to being discovered and copied. Trade secrets may be enhanced with either license or use agreements, but still offer only limited intellectual property protection. More protection may be obtained through the 1994-amended Plant Variety Protection Act, which allows the breeder to control the commercial rights associated with a new variety for 20 years. Third parties can use the protected variety for research without infringement and grower-customers can save seed harvested from the protected variety for use on their own farm. Another form of intellectual property protection is utility patents. These patents allow the inventor to control both research and commercial uses of the invention as well as all forms of production and sales for 20 years. In addition, a special form of protection, a plant patent, may be obtained for asexually reproducing plants to protect against the unauthorized asexual reproduction of the protected variety for 20 years. Plant patents should not be confused with utility patents containing claims for plants.

What are the advantages and disadvantages of the different types of protection?

Trade secrets can be powerful if the invention is not easily discoverable since they can last forever. However, if the invention is never disclosed, the public can never access it. The other forms of protection guarantee that an invention ends up in the hands of the public in exchange for a limited period of exclusivity. This allows the inventor to obtain a

return on the investment, encouraging further private research and development. Under a strong intellectual property rights system, a balance is struck between rewarding the innovator and giving the public access to new product or technology. Moreover, utility patents for plants and plant patents provide a mechanism to enforce resistance management practices and other forms of environmental stewardship through licensing agreements.

Who determines what type of intellectual property protection is required?

In the United States, intellectual property protection, enforcement, and licensing for any invention is at the sole discretion of the inventor. The type of protection selected is generally directly related to the nature of the invention and perceived level of risk in the marketplace. For example, not all inventions related to plants meet the rigorous standards of utility patent laws, but they may meet the less restrictive requirements of Plant Variety Protection. Innovations are the private property of the inventor. ASTA believes that U.S. seed companies have the right to protect their property to the fullest extent possible in order to make a return on their investments in research and development.

Can the public sector access patented seeds?

Yes. Protection of intellectual property through utility patents and plant variety protection always puts the protected invention in the public domain since both are of limited duration. The public's benefit for an exclusive period of protection for the inventor is public availability of the invention at the expiration of that period. To ensure that, seed deposits, or small samples, must be given to seed banks, which preserve the seed for public use upon expiration of protection. Samples from these deposits become available, subject to the rights of the patent owner, when the patent is granted and in some cases, even earlier. Compared to former practices, where new varieties could be held as trade secrets indefinitely and never disclosed to the public, the deposits made to obtain utility patents allow access to elite genetic pools not previously available.

Do intellectual property rights only benefit large companies with deep pockets?

No. Intellectual property protection works for everyone for many purposes, not just for commercial companies making profits. Universities have an opportunity to benefit from their innovations by controlling the manner in which they are used and the terms under which they are made available through the Plant Variety Protection Act or patents. Since a fundamental mandate of all universities is to publish the results of their work, they cannot rely on trade secrets. Small companies and countries may also benefit from protection in licensing to larger companies and countries.

Why is it important for developing countries to adopt intellectual property laws?

Developing nations need to establish and enforce intellectual property laws to improve the viability of their research and development activities and to gain access to innovations from other countries. Clearly, companies and universities spending money on seed research and development need to justify those expenses by being financially rewarded for their efforts. Hence, companies and universities are unwilling to go to the expense of transferring new technologies to countries that lack intellectual property protection. The result is that these countries tend to be denied access to much-needed new crop varieties and technologies. It is estimated that 80 percent of seed in developing countries is farmer-saved or supplied by the government, which provides limited numbers of old seed varieties and outdated technology.

What are the risks of selling patented seed in countries that lack patent protection?

Black markets for patented seed may be created in countries lacking patent protection, resulting in unfair pricing differentials. Theft of new seeds and technologies can result in millions of dollars of lost revenue to investors, which discourages further investment. In addition, if countries allow mandatory licensing of intellectual property, its worth is devalued, thereby, decreasing future investment in seed research and development. Mandatory licensing allows those who did not contribute to the research to benefit from the successful projects without bearing the costs of any unsuccessful projects.

What is ASTA's position on mandatory licensing?

ASTA believes that inventors should be able to determine whether or not to license their innovations. Mandatory or compulsory licensing of intellectual property to companies or individuals not involved in the research devalues the worth of the innovation, thereby, discouraging further investment in seed research and development.

What is ASTA doing to advance intellectual property rights protection?

ASTA is working with its members, farm groups, and international governments to advocate the establishment and enforcement of intellectual property laws worldwide. It participates in Congressional hearings on the topic and provides written comments on related policy matters.

January 14, 2008