



IP PROTECTION IN U.S. SEED INDUSTRY

美国种子行业知识产权保护



IP PROTECTION IS ESSENTIAL FOR CONTINUED SUCCESS OF SEED INDUSTRY (1)

知识产权保护对种子行业的持续成功至关重要 (1)

Plant Variety Protection Act 植物品种保护法案

□ Newly Created Varieties can be protected by a Plant Variety Protection Certificate
植物品种保护证可以对新品种进行保护

□ USDA issues PVP certificate and holds a representative seed deposit of the protected variety
美国农业部颁发植物品种保护证书，并对所保护的品种留有一分种子存样

□ Protection Term is for 20 years from the date of issuance, 25 years for trees and vines
保护期限为自颁发之日起的20年，对于树木和爬藤类的保护期限为25年

□ PVP right is a personal right to exclude others from selling or marketing, importing or exporting, sexually multiply or propagate, or using in seed production the protected variety without authorization

植物品种保护权是授予个人的一种权利，该权利禁止他人未经授权对保护品种进行销售或营销、进出口、有性繁殖或在种子生产中进行使用




UPOV

The International Union for the Protection of New Varieties of Plants

为保护植物新品种而成立的国际性联盟



Countries marked brown are in the process of joining UPOV
棕色标记的国家正在加入UPOV



Starting next 50 years for UPOV

开始UPOV的下一个50年

- Just celebrated 50th anniversary since the original Convention (Act 1961) was signed
自最初的1961文本签署以来，刚刚过去50年
- Two major revisions, 1978 and 1991
两次主要的修订：1978年和1991年
- 70 Members today
如今已有70个成员
- Time coming for drafting UPOV 2020?
是否已经到了起草UPOV2020的时间？
- By that time China would be more than 40 years behind
到2020年，中国可能已落后40年



UPOV 1991 Act—UPOV 1991

Some of the Signatories 部分签署国

China would hold a rightful place in this company
中国将保持一个公正的席位

Australia 澳大利亚

Russian Federation 俄罗斯联邦

EU 27 欧盟

Turkey 土耳其

Japan 日本

Ukraine 乌克兰

Republic of Korea 韩国

United States of America 美国

New members are joining under 1991 Act
1991 文本下新的成员国即将加入

Comparison of UPOV 1978, 1991 Conventions and the Patent Law
UPOV 1978和1991文本和专利法的对比

	UPOV 1978 ACT	UPOV 1991 Act	Patent Law 专利法
Protection coverage 保护范围	Varieties of species defined by a country 各国规定的物种品种	Varieties of all species 所有物种品种	Inventions 发明
Requirement for protection 保护要求	Distinct, uniform and stable (DUS) 独特的、统一的、稳定的	New, distinct, uniform and stable 新的、独特的、统一的、稳定的	New, inventive non-obvious, industrial application and utility 新的、产业应用及实用性
Scope of breeders rights 育种者权利范围	Production and marketing of propagation material (only seed) 生产和销售繁殖材料—仅种子)	Production, marketing export, import and stocking of all material (seed and other parts) 生产、销售、进出口、储存所有材料（种子及其它部分）	Commercial use of protected matter 被保护事件的商业化使用
Minimum duration of protection 保护期限	15 years 15年	20 years 20年	17-20 years (OECD) 17-20年（经合组织）
Breeders' exemption 育种者豁免	Yes / 是	Not for essentially derived varieties * 不适用于实质派生品种	No / 否
Farmers privilege 农民特权	Yes (in practice) 是（试行）	Optional; to be governed by national laws 可选；由当地国家法律管理	No / 否

*** Essentially Derived Variety 实质衍生物种**

A plant variety is taken to be an essentially derived variety of another plant variety if:

符合如下条件的植物品种定义为其它植物品种的实质派生品种：

(a) it is predominantly derived from that other plant variety; and

显著地由原始植物品种派生而来；并且

(b) it retains the essential characteristics that result from the genotype or combination of genotypes of that other variety; and

保留由原始品种基因型或基因型重组带来的显著特征；并且

(c) it does not exhibit any important (as distinct from cosmetic) features that differentiate it from the other variety.

不显示明显区别于原始品种的重要特征



IP PROTECTION IS ESSENTIAL FOR CONTINUED SUCCESS OF SEED INDUSTRY (2)

知识产权保护对种子行业的持续成功至关重要(2)

Patent Act

专利法

□Seeds and plants can also be protected by utility patents

实用专利也可以对种子及植物进行保护

□U.S. Patent and Trademark Office issues patent and patent holder needs to make a seed deposit with American Type Culture Collection

美国专利和商标办公室颁发专利， 专利持有人必须 将一份种子样品存放在美国模式培养物集存库

□Protection term is for 20 years from the date of filing

保护期限为自申请之日起的20年

□Patentee has the right to exclude others from making, using or selling the patented invention without authorization

专利持有人有权禁止他人未经授权对专利发明进行制造、使用或销售

□Patent law does not allow farmer to save seed, nor allow others to use patented seed in breeding during patent term

专利法禁止农民在专利保护期内保留种子， 也不充许他人在专利保护期内利用专利种子进行育种。

□Small entities enjoy substantial discounts on patent filing fees

专利法禁止农民在专利保护期内保留种子， 也不充许他人在专利保护期内利用专利种子进行育种。



SEED IP PROTECTION DOES NOT MONOPOLIZE GERMPLASM RESOURCES

对种子知识产权的保护绝非对种质资源的垄断

❑ IP laws protect the genetic improvements made by the breeder

知识产权保护法 对育种家做出的基因改良提供保护

❑ Individual, pre-existing genetic components are still accessible to the breeding community

育种家们仍可获取单独的、已存在的基因成分

❑ Analogy between seashell necklaces and improved varieties: One can always find seashells and compose a necklace to her own liking; but she may not take a finished necklace made by another

如果将改良品种比喻成海贝壳项链：人人都可以拾到海贝壳并按自己喜欢的样式穿成项链，但是人们不能将他人穿好的项链拿走

❑ Protected genetic improvements as public good: The protected variety can be used as basis for further improvement when protection period expires

受保护的基因改良产品可成为公共品：当保护期结束后，人人都可以使用受保护的品种并在其基础上进行进一步改良



APPLICATIONS OF IP PROTECTION IN SEED INDUSTRY

种子行业对知识产权保护的应用

□Seed sales to grower customers: Grower Licenses allow planting of seed for a single commercial crop

将种子销售给种植客户：种植者许可证可对某单一商业作物的种子种植进行许可

□Inter-Company Licensing: Genetic and trait licenses to supplement licensee company's product pipeline

公司之间的许可：利用基因及性状许可以补充被许可公司的产品线

□IP Enforcement: IP rights are private rights enforced by the rights holder in courts of competent jurisdiction, typically federal courts

知识产权保护的执行：知识产权保护权是一种私有权利，该权利是由权利持有人在有管辖权的法院特别是联邦法院执行的

□Marketing Flexibility: Because of the self-replicating nature of seed products, Breeder would have to charge a hefty price to the first purchaser in order to shift the risk of loss and burden of protection to the first purchaser in the absence of effective IP protection. With effective IP protection, the Breeder has choice of different business models to realize a return on investment and also relieve the purchaser(s) the risk and burden of safeguarding the purchased seed product

灵活性营销：由于种子产品具有自我复制的特性，在缺乏有效知识产权保护的情况下，育种家通常会对第一个购买者收取较高的费用，以转嫁损失风险及对产品进行保护的负担。具有有效的知识产权保护后，育种家就可以采用多种业务模式实现投资回报，同时也缓解了购买者的风险、降低了保护已购种子产品的负担

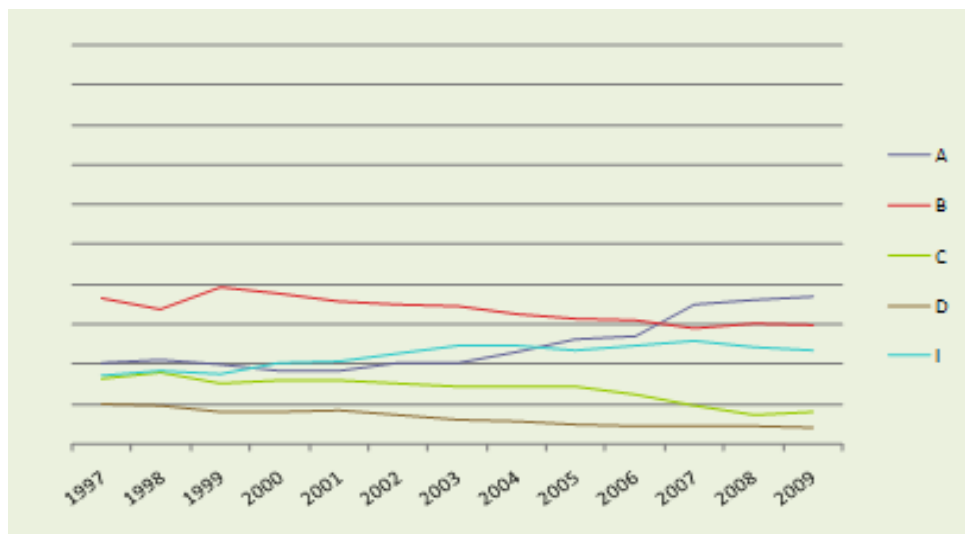
STRONG IP PROTECTION DOES NOT STIFLE SMALL SEED COMPANY COMPETITION

较强的知识产权保护不会抑制小种子公司的竞争力

□Historic Share, U.S. Corn Seed: 1997-2009

历史性市场份额，美国玉米种子：1997-2009

Source: dmrkynetec



The corn seed data represented above illustrates the share held by the four largest companies (Lines A, B, C and D) and 169 smaller, independently owned seed companies (Line I). Company A and Company B exchanged position between 2006 and 2008. Company C has lost share overall but shows a small increase in 2009. Of particular note is line I, the independently owned seed companies, which grew from 1997 to 2007 and still have significant share.

上述玉米种子数据列出了四大种子公司（分别由A、B、C及D线代表）及169家小型、独立种子公司（由I线代表）所持有的市场份额。在2006及2008年，A公司与B公司互换了位置，C公司在总体上失去了一些份额，但在2009年却有小幅度上升。特别值得关注的是I线，小型种子公司在1997至2007年间一直处于上升势态，并且依旧持有相当大的份额。



STRONG IP PROTECTION AFFORDS FARMERS MORE SEED CHOICES

较强的知识产权保护为农民提供了更多的可选种子

□Farmer Reported Seed Choices: 2008-2009

在2008-2009间农民可选种子

	Corn ('09)	Soybeans ('09)	Cotton ('08)
Companies	173	157	10
Brands	202	183	12
Hybrids/Varieties ^{viii}	4,381	2,126	169

□Farmer Reported Average Price per Bag of Seed: 2008/2009

在2008/2009年，农民每袋种子平均价格

	High	Low	Variation
Corn ('09)	\$250.00	\$ 26.00	961%
Soybean ('09)	\$ 50.27	\$ 16.25	309%
Cotton ('08)	\$333.17	\$ 71.66	465%

Thank you!

謝謝

