
The Role of Contracts in the Exercise of Plant Breeders' Rights

Presented at the
UPOV Symposium on Contracts in relation to
Plant Breeders' Rights

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Pioneer Hi-Bred International, Inc., a DuPont business



PARTIES

- Public
- Private
- Banks
- NGOs
- Farmers

SUBJECT

- Product or Experimental;
GMO or Non-GMO
- Hybrid, Inbred, Variety
- Trait, Construct, Promoter
- Process, Know-how,
Confidential Information



GOAL

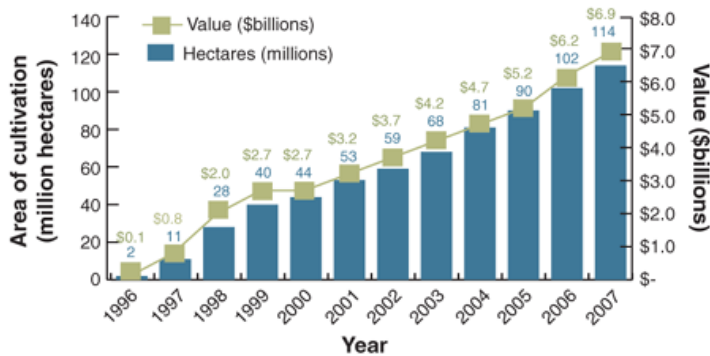
- In-license
- Out-license
- Various Research and/or Commercial Purposes

IPP

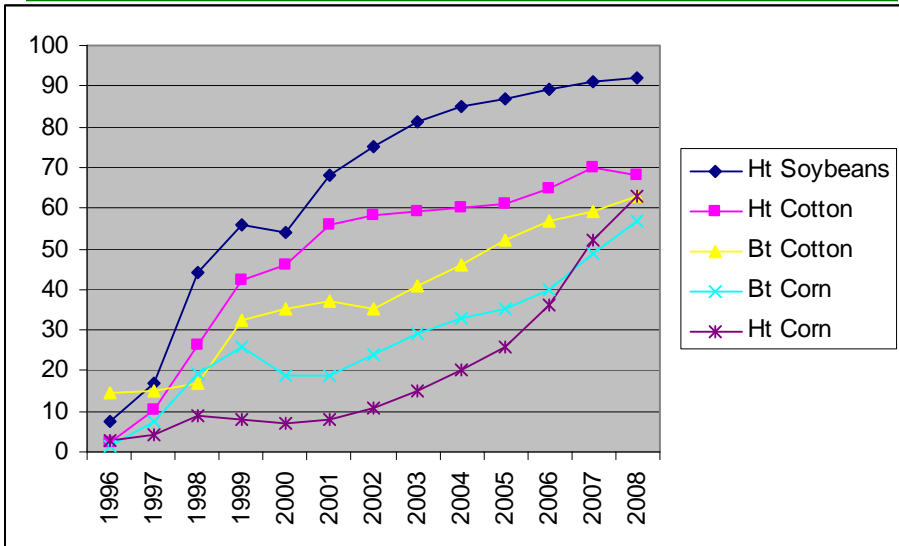
- Patent
 - PVP
 - Trade Secret
 - IT PGRFA
 - CBD
-



The area planted with transgenic crops rose by 12% in 2007, with estimated crop value climbing by \$700 million.

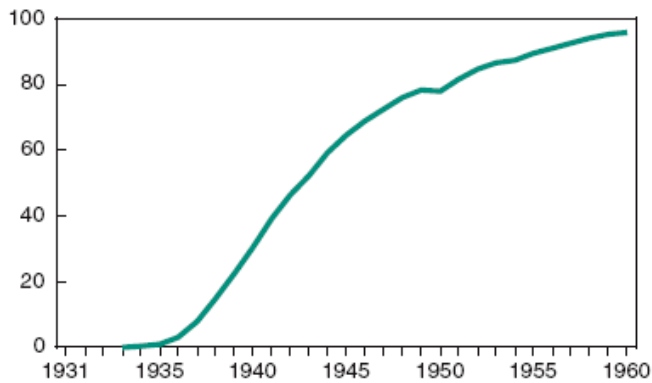


Rapid growth in adoption of GMO crops in the U.S.



Adoption of hybrid corn

Percent of total corn acreage



Source: *Agricultural Statistics*, NASS, USDA, various years.



Traits are Broadly Licensed and Widely Available

TRAIT	# COMPANIES	# BRANDS
CORN		
BT11	32	45
DAS-59122	46	79
GA21	30	39
MIR604	16	23
MON810	91	147
MON863	80	130
NK603	93	150
T25	67	110
TC1507	60	100
SOYBEANS		
40-3-2	74	144



The U.S. Farmer-Customer:

- Increasingly Chooses to Plant GMOs
- At the Prices Offered
- Under the Conditions of Sale
- In Spite of Product Alternatives



Terms unrelated to IPP per se

- Warranty Language
- Limitation of Liability
- Reference to Applicable Documents



http://images.google.com/imgres?imgurl=http://farm1.static.flickr.com/22/34596578_d2da71053d.jpg&imgrefurl=http://www.flickr.com/photos/carbonnyc/34596578/&h=447&w=500&sz=31&hl=en&start=98&usq=_UxsEEoS4dFVoyipNPIHMnL_M1H4=&tbnid=JsJINmJITIBu7M:&tbnh=116&tbnw=130&prev=/images%3Fq%3Dcoffee%2Bcup%2Bcaution%26start%3D80%26gbv%3D2%26ndsp%3D20%26hl%3Den%26sa%3DN



Terms related to IPP

- Stewardship Provisions
- Grant of License
- Limitations of Use



Stewardship

- Refuge Requirements
- Marketing Restrictions
- Geographic Restrictions

Stewardship Preserves Value for the
Developer AND Farmer-Customer



Ethical Principles

- Respect and apply biotechnology for the benefit of humankind
- Listen and respond to concerns
- Priority is health, safety and environmental protection
- Enhance world food supply, sustainable agriculture, environmental benefits
- Conservation of biological diversity



Limited License

USE RESTRICTIONS AND LIMITED LICENSES: THE ONLY PERMISSIBLE USE OF THE SEED CONTAINED IN THIS BAG IS FOR THE PRODUCTION OF FORAGE OR GRAIN FOR FEEDING OR PROCESSING. PURCHASER AGREES THAT IT IS GRANTED SOLELY A LIMITED LICENSE TO USE THIS PRODUCT TO PRODUCE GRAIN AND/OR FORAGE. ABSOLUTELY NO RESEARCH OR BREEDING MAY BE DONE WITH THE SEED CONTAINED IN THIS BAG.



Limited License Restrictions (U.S.)

- Breeding, Research
- Seed Production
- Marker Profiling

Require permission of and benefit sharing by the owner



Additional Restrictions

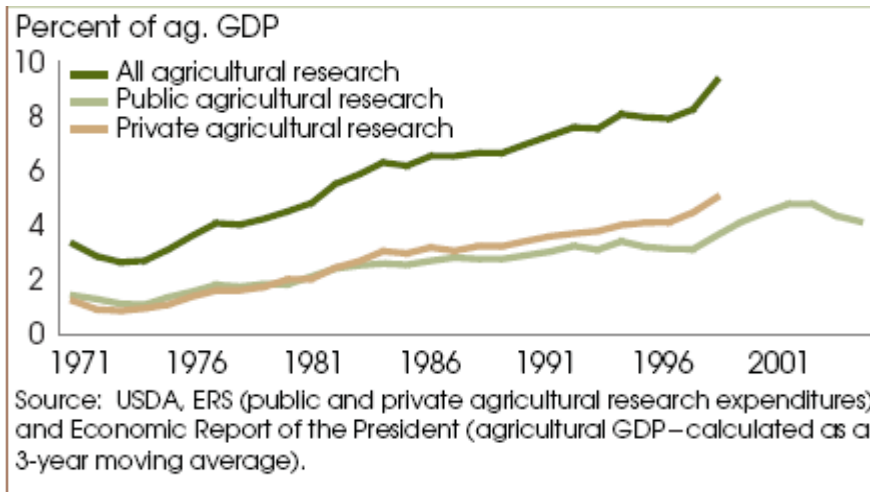
- Inbreds in Commercial Bags
- Re-plant
- Export
- Third Party Transfer
- Terms to Encourage Compliance



Intellectual Property Protection

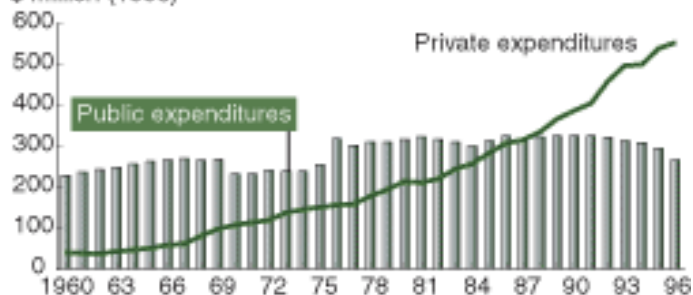


PUBLIC VS PRIVATE RESEARCH SPENDING



Private expenditures on crop variety R&D have exceeded those of the public sector since the late 1980s

\$ million (1996)



Source: Public expenditures are from the Current Research Information System, Cooperative State Research, Education, and Extension Service, USDA. Private expenditures are ERS estimates developed from various sources.



U.S. Soybean Area Market Shares

	Unknown	Public Sector	Private Sector
1980	22	70	15
1997 est	n.a.	10-30	70-90

Economic Research Service/USDA, Economic Issues in Agricultural Biotechnology/AIB-762



Effective IPP is elusive

- U.S. Hard Red Wheat
- Soybeans in Argentina
- India?
- China?



Social Benefits of Effective IPP

- New Traits
- Improved Germplasm
- Inventions Placed in the Public Domain (upon patent expiration)
- Increased Farmer Return
- Decreased Food Cost



