



PANITCH TRAINING ACADEMY

Insights From Leaders In IP Law

Training Academy Session # 35

IP Protections for New Plant Varieties: Options and Strategies for Securing and Enforcing Protections

Travis W. Bliss, Ph.D.
Stephany G. Small, Ph.D.

October 8, 2025

Legal Disclaimer

The material provided in this presentation is for informational purposes only and not for the purpose of providing legal advice. The opinions expressed herein are the opinions of the individual author and may not reflect the opinions of the firm or any individual attorney. The provision of this presentation and your receipt and/or use of it (1) is not provided in the course of and does not create or constitute an attorney-client relationship, (2) is not intended as a solicitation, (3) is not intended to convey or constitute legal advice, and (4) is not a substitute for obtaining legal advice from a qualified attorney. You should not act upon any such information without first seeking qualified professional counsel on your specific matter.

What are we going to discuss?

- IP basics: Why do plant IP rights exist? Do they really promote progress? What do they get you?
- Types of varietal IP protection that are available for novel cultivars in the U.S.
- Protections in other countries
- Impact of rights on freedom to operate
- Trademarks as an additional layer of protection
- Licensing novel varieties

What is the legal basis for plant IP rights?

- Congress put first patent law in place with the Patent Act of 1790
 - First U.S. patent issued July 31, 1790
- U.S. was the first country to specifically provide IP rights for novel plant varieties
 - U.S. Plant Patent Act of 1930 provided rights for asexually reproduced plants

What is the legal basis for plant IP rights?

- The rest of the world improved by offering IP for any plant
 - The International Union for the Protection Of New Varieties of Plants (UPOV) established in 1961
 - UPOV Convention revised in 1972, 1978, 1991
- U.S. passed its Plant Variety Protection Act (PVPA) in 1970
 - U.S. updated its act to be compliant with most recent 1991 UPOV Convention
 - U.S. PVPs covered only sexually (seed) produced plants and tubers until 2019
 - 2018 Farm Bill expanded PVP protection to asexually reproduced plants

What is the legal basis for plant IP rights?

- U.S. also allows protection of plants using utility patents
 - Historically this only covered seed reproduced plants due to enablement requirement
 - Need to make a seed deposit to satisfy enablement
 - Recent technical advances have opened utility patents to asexually reproduced varieties
 - Can now make a tissue culture deposit to satisfy enablement

Why do IP rights exist?

- “To promote the Progress of Science and useful Arts”
- The IP “deal with the government”: In exchange for teaching the world how to do something, the government will give you a limited monopoly over that invention
- IP rights create an incentive for people/companies to invest resources into developing new and better things
- **But does it work?**

Does it work?

- **University big brains say it does!**
- 2022 Harvard study: “Flowers of Invention: Patent Protection and Productivity Growth in US Agriculture”
 - Examined investment into plant varieties and the new plant varieties produced immediately after patent protection for a variety became possible
 - Also looked at the impact of those new varieties on yield, profits, and land value

Harvard Study Results

- “the introduction of patent protection led to a substantial increase in novel variety development”
- “Technology development was driven by a rapid increase in private sector investment ... and led to an increase in crop yields”
- “The prospect of patent protection substantially increased private research investment and did not have a significant effect on public research investment”
 - 2X increase in private sector investment in 10 years
- “the prospect of patent protection spurred technological progress”

What do plant IP rights give you?

- Intellectual property is an exclusionary right
 - Gives the holder the right to exclude others from using their invention
 - Does not actually give the holder the right to do something
- Plant IP rights give the right to exclude others from:
 - Reproducing/duplicating your variety
 - Using your variety to generate downstream varieties

Types of downstream varieties

- F1 seed for sale
- Essentially derived varieties (EDV)
 - Sports, mutants
 - Genetic editing(?)
- Novel varieties developed through breeding

What are we going to discuss?

- IP basics: Why do plant IP rights exist? Do they really promote progress? What do they get you?
- Types of varietal IP protection that are available for novel cultivars in the U.S.
- Protections in other countries
- Impact of rights on freedom to operate
- Trademarks as an additional layer of protection
- Licensing novel varieties

Three Types of U.S. IP Protection for Varieties

- **Plant Patent**
 - Issued by U.S. Patent and Trademark Office (USPTO)
- **Utility Patent**
 - Issued by USPTO
- **Plant Variety Protection (PVP) Certificate**
 - Issued by U.S. Department of Agriculture (USDA)

Similarities of Three Types

- Variety Name
 - Use a boring, unpronounceable name ('SGS123')
 - Do NOT use a name that might be used for branding
- Time of filing application – Novelty Bar
 - Certain activities can start the clock for filing
 - Must file one year from activity in U.S.
- Disclosures require:
 - Description of new cultivar
 - Breeding history - identify parent(s)
- Identify Inventor(s)/Breeder

Plant Patents: Basics

- Only available for asexually reproduced varieties
 - Citrus trees, avocado, pomegranate, sterile turfgrass
- Requires a detailed botanical description
 - Must distinguish the variety from its parents and most similar varieties available
- No requirement for data from comparative field trials
- No biological deposit requirement

Plant Patents: Basics

- Usually takes 4-12 months to get allowed
- Very high allowance rate
- Lowest all-in cost, and all costs are paid by time plant patent issues
 - Typical all-in cost is \$3K-\$10K
 - No maintenance fees or deposit fees

Plant Patents: Inventorship

- Conception is invention
- Multiple inventors for a single new variety is possible
 - Who decided the cross?
 - The person who performed the cross may or may not be an inventor
 - Who discovered the sport/mutant?
 - Who did the selection of the new variety?

Plant Patents: Novelty Bar

- Strict novelty bar
 - No Sale, offer for sale, or public availability of the variety anywhere in the world >1 year prior to filing the application
 - Just a disclosure of the variety should not destroy novelty
 - Will likely have to argue with the USPTO about the disclosure (improvement to USPTO searching capability and higher requirement of evidence)
 - Need to be careful with trials and trade shows!
 - Display at an after-hours show at Home Depot was novelty destroying of ornamental plant
 - Public fruit tastings could be problematic

Plant Patents: Scope of Protection

- Scope of protection is defined by the statute
- Gives you the right to exclude others from:
 - asexually reproducing the variety
 - making, using, or selling those asexually reproduced plants in the U.S.
 - including whole plants and parts
- BUT: Patent exhaustion limits ability to go after anyone who bought the plant legally and is using it to produce harvested material or for breeding

Plant Patents: Example

(12) **United States Plant Patent**
Radler

(10) **Patent No.:** US PP11,836 P2
(45) **Date of Patent:** Apr. 10, 2001

(54) **SHRUB ROSE PLANT NAMED 'RADRAZZ'**

OTHER PUBLICATIONS

(75) **Inventor:** William J. Radler, Greenfield, WI (US)

UPOV-ROM, Feb. 1999, Plant Variety Database, GTI Jouve Retrieval Software, citation for 'Razzle Dazzle', pp 3995.* American Association of Nurseryman, 1990, "Plant Patent Directory" p. 123, numerical listing of plant patents.* Haring, ed., 1986, "Modern Roses 9", The American Rose Society, Shreveport, LA., p. 44.*

(73) **Assignee:** CP (Delaware), Inc., Wilmington, DE (US)

(*) **Notice:** Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

* cited by examiner

Primary Examiner—Howard J. Locker
(74) *Attorney, Agent, or Firm*—Burns, Doane, Swecker & Mathis, L.L.P.

(21) **Appl. No.:** 09/229,323

(22) **Filed:** Jan. 13, 1999

(57) ABSTRACT

(51) **Int. Cl.**⁷ A01H 5/00

(52) **U.S. Cl.** Plt./108

(58) **Field of Search** Plt./102, 107, 108,
Plt./149, 150, 151

A new and distinct variety of landscape shrub rose plant is provided which forms in abundance on a substantially continuous basis attractive single blossoms that are red in coloration. The vegetation is vigorous and the growth habit is round and bushy. Attractive ornamental satiny green foliage is formed. Excellent disease resistance to blackspot is exhibited. Additionally, the new variety is particularly well suited for growing as distinctive ornamentation in the landscape.

(56) References Cited

U.S. PATENT DOCUMENTS

P.P. 3,995 * 12/1976 Warriner Plt./141
P.P. 4,224 * 3/1978 Paolino Plt./130
P.P. 4,225 * 3/1978 Buck Plt./137

1 Drawing Sheet

I claim:

1. A new and distinct variety of landscape shrub rose plant characterized by the following combination of characteristics:

- (a) abundantly and substantially continuously forms attractive single blossoms that are red in coloration,
- (b) exhibits a round and bushy growth habit;
- (c) forms vigorous vegetation,
- (d) forms attractive ornamental green foliage with a satiny finish, and
- (e) exhibits excellent resistance to blackspot;

substantially as herein shown and described.

- What botanical details are needed?
 - Need to collect this data in preparation for filing
 - Need to file before the critical date

“Varietal” Utility Patents: Basics

- Available for asexually and seed reproduced varieties
- Requires a detailed botanical description, plus sufficient information to support claims relating to breeding, hybrids, mutants, genetic engineering, etc.
- Generally required to make a biological deposit
- Usually takes 12-36 months to get allowed
- Lower allowance rate; depends on claim scope
- Typical cost of \$5K-\$15K through issuance plus \$6K-\$14K in maintenance fees over patent life;
 - Plus cost of tissue culture deposit (~\$4K) for asexually reproduced variety

“Varietal” Utility Patents: Inventors

- Conception is invention
- Based on claims, not disclosure of the application
- Multiple inventors for a single new variety is possible
 - Who decided the cross?
 - The person who performed the cross may or may not be an inventor
 - Who discovered the sport/mutant?
 - Who did the selection of the new variety?

“Varietal” Utility Patents: Novelty Bar

- Strict novelty bar
 - No sales or public availability anywhere in the world >1 year prior to filing the application
 - Just a disclosure of the variety should not destroy novelty
 - Likely cause additional communication with USPTO (improvement to USPTO searching capability and higher requirement of evidence)
 - Need to be careful with trials and trade shows!
 - Do not use breeder code or variety name in public taste trials (A, B, etc.)
 - Have NDA or published rules for public viewing

“Varietal” Utility Patents: Scope of Protection

- Scope of the claims dictates scope of protection
- Gives you the right to exclude others from making, using, or selling your claimed invention
- Should provide protection over your new variety, plus often get protection over:
 - breeding with your new variety
 - using the variety to produce F1 seed
 - essentially derived varieties (mutants, GM versions, etc.)
 - marker hunting in the variety

“Varietal” Utility Patents: Example

(12) United States Patent Kallem		(10) Patent No.: US 12,376,552 B1	
		(45) Date of Patent: Aug. 5, 2025	
(54) SOYBEAN VARIETY 5PWSG47		(56) References Cited	
(71) Applicant: PIONEER III-BRED INTERNATIONAL, INC. , Johnston, IA (US)		U.S. PATENT DOCUMENTS	
(72) Inventor: Randy Leroy Kallem , Des Moines, IA (US)		6,916,975 B1 7/2005 Hedges 7,868,232 B4 1/2011 Sweet 9,357,737 B4 * 6/2016 Schillinger A01H 6/542 9,854,766 B1 1/2018 Corbin	
(73) Assignee: PIONEER III-BRED INTERNATIONAL, INC. , Johnston, IA (US)		OTHER PUBLICATIONS	
(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 103 days.		US Plant Variety Protection Application No. 202300008 for Soybean5PWSG47; filed Oct. 4, 2022. * cited by examiner <i>Primary Examiner</i> — Medina A Ibrahim	
(21) Appl. No.: 18/046,527		(57) ABSTRACT	
(22) Filed: Oct. 14, 2022		A novel soybean variety, designated 5PWSG47 is provided. Also provided are the seeds of soybean variety 5PWSG47, cells from soybean variety 5PWSG47, plants of soybean 5PWSG47, and plant parts of soybean variety 5PWSG47. Methods provided include producing a soybean plant by crossing soybean variety 5PWSG47 with another soybean plant, methods for introgressing a transgenic trait, a mutant trait, and/or a native trait into soybean variety 5PWSG47, methods for producing other soybean varieties or plant parts derived from soybean variety 5PWSG47, and methods of characterizing soybean variety 5PWSG47. Soybean seed, cells, plants, germplasm, breeding lines, varieties, and plant parts produced by these methods and/or derived from soybean variety 5PWSG47 are further provided.	
(51) Int. Cl. A01H 5/10 (2018.01) A01H 6/54 (2018.01)		20 Claims, No Drawings	
(52) U.S. Cl. CPC A01H 6/542 (2018.05); A01H 5/10 (2013.01)			
(58) Field of Classification Search None See application file for complete search history.			

What is claimed:

1. A plant or a seed of soybean variety 5PWSG47, representative seed of the variety having been deposited under NCMA Accession Number 202502026.
2. A soybean plant, or part thereof, produced by growing the seed of claim 1.

4. A soybean seed obtained by introducing a transgene into soybean variety 5PWSG47, representative seed of the variety having been deposited under NCMA Accession Number 202502026, wherein the soybean seed produces a soybean plant comprising the transgene and otherwise comprising all the physiological and morphological characteristics of soybean variety 5PWSG47 when grown under the same environmental conditions.

5. The seed of claim 4, wherein the transgene confers a trait selected from the group consisting of male sterility, a site-specific recombination site, abiotic stress tolerance, altered phosphate, altered antioxidants, altered fatty acids, altered essential amino acids, altered carbohydrates, herbicide resistance, insect resistance, and disease resistance.

6. A soybean plant produced by growing the seed of claim 4.

7. A method of introducing a mutation into the genome of soybean variety 5PWSG47, the method comprising applying a mutagen to the plant or seed of claim 1, wherein the mutagen is selected from the group consisting of ethyl methanesulfonate, gamma radiation and sodium azide, and wherein the resulting plant or seed comprises a mutation.

8. A method for producing soybean seed, the method comprising harvesting soybean seed from a cross of two soybean plants, wherein at least one soybean plant is the soybean plant of claim 1.

9. An F1 soybean seed produced by the method of claim 8.

10. A method for developing a second soybean plant, the method comprising applying plant breeding techniques to a plant grown from the seed of claim 9, wherein application of the techniques results in development of the second soybean plant.

- Claims of patent define scope of protection
- What botanical details are needed?
 - Need to collect this data in preparation for filing
 - Need to file before the critical date
- Need to include discussion of downstream varieties

PVPs: Basics

- Available for asexually and sexually reproduced varieties
 - Until 2018 only available for seed reproduced
- Application must include:
 - Detailed botanical description
 - Breeding history and selection process
 - Data from comparative field trials for DUS testing
 - No gov't oversight – just do the trial and report the data
 - Trials need not be completed in the U.S.
- Deposit: Must make a seed deposit; need not make a TC deposit (for the foreseeable future)

PVPs: Basics

- Usually takes 6-18 months to get allowed
- Very high allowance rate
- Typical all-in cost is \$7K-\$10K total for application
 - All fees paid by issue date – no downstream maintenance fees

PVPs: Breeder

- Breeder can be one or more persons
 - Breeder can be person or entity
1. Person who bred, or discovered and developed, a variety
 2. Employer: Person who is the employer of (1) or who has commissioned the latter's work, where the laws of the relevant Contracting Party so provided
 3. Successor in the title of (1) or (2)

PVPs: Novelty Bar

- Novelty bar is dependent on where the sale occurred:
 - Sales within the U.S. >1 year before application date destroy novelty
 - Sales outside the U.S. >4/6 years before the application date destroy novelty

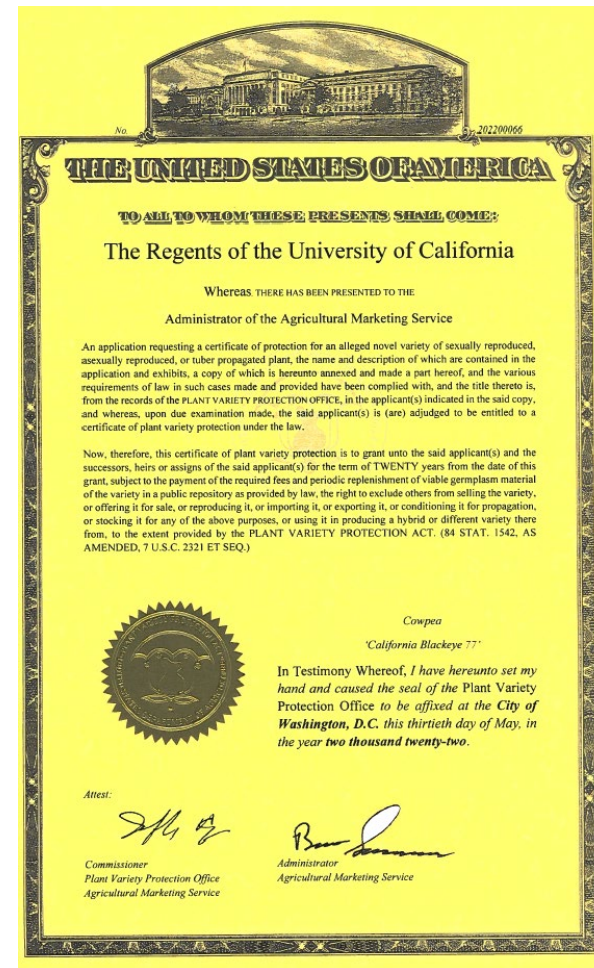
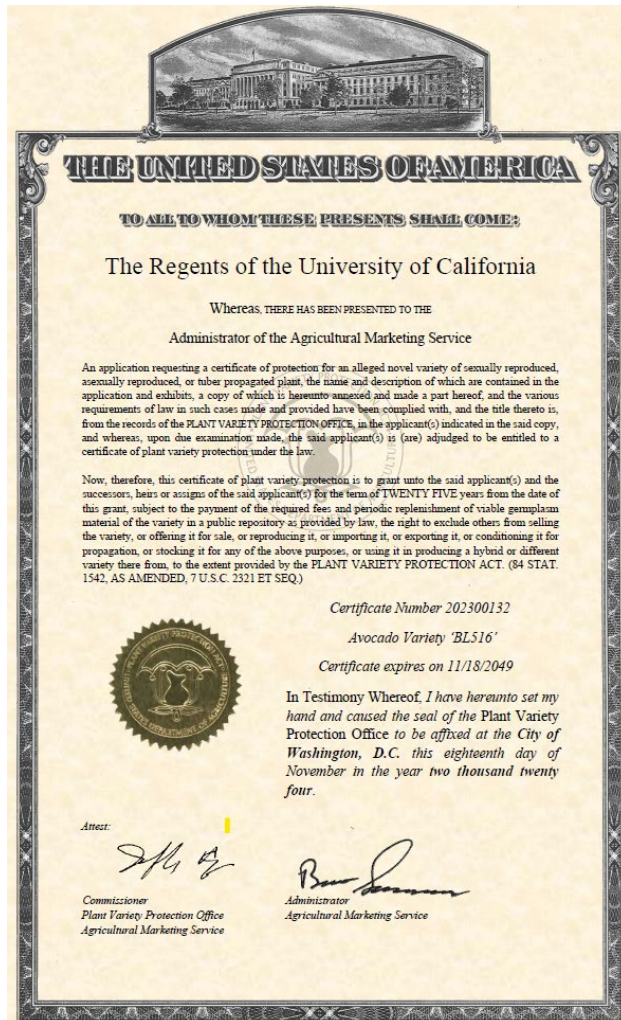
PVPs: Scope of Protection

- Scope of protection is defined by the statute
- Gives you the right to exclude others from making, using, or selling your particular cultivar in the U.S.
- Also protects:
 - using the variety to produce F1 seed for sale
 - essentially derived varieties
 - Third party cannot commercialize an EDV without permission of PVP holder

PVPs: Statutory Limitations

- Research Exemption (a.k.a. Breeder's Exemption):
 - “The use and reproduction of a protected variety for plant breeding or other bona fide research shall not constitute an infringement of the protection provided under this chapter.”
- Crop Exemption (a.k.a. Farmer's Exemption):
 - “it shall not infringe any right hereunder for a person to save seed produced by the person from seed obtained... by authority of the owner of the variety for seeding purposes and use such saved seed in the production of a crop for use on the farm of the person”

PVPs: Examples



Comparison of the Three Types of Protection

	Plant Patent	PVP	"Varietal" Utility
Type of reproduction	Asexual only	Both seed and asexual	Both seed and asexual
Deposit req't	No	Yes (seed, tuber) Not now (asexual)	Yes
Scope of protection	Only specific cultivar developed, including whole plants and all parts	Specific cultivar + hybrid seed produced for sale + essentially derived varieties (not parts)	Specific cultivar + hybrids, plant parts, mutants, breeding, marker identification, etc.
Limits on protection	Exhaustion of all rights except reproduction for any plants that are sold	Research / Breeder's Exemption specifically allows breeding Crop/Farmer's Exemption does <u>not</u> apply to asexual reproduction	Exhaustion of plant rights for plants that are sold, maybe exhaustion of method claims, no exhaustion of downstream plants
Time bar for filing	1 year from first sale or public availability anywhere in world	1 yr from U.S. sale; 4/6 yrs from sale elsewhere	1 year from first sale or public availability anywhere in world
Duration	20 years from filing	20/25 years from <u>issuance</u>	20 years from filing
Approx. cost	\$3K-\$10K total	\$6K-\$10K total	\$5K-\$15K through issuance (<u>plus</u> cost of deposit and \$6K-\$14K in maintenance fees)

What are we going to discuss?

- IP basics: Why do plant IP rights exist? Do they really promote progress? What do they get you?
- Types of varietal IP protection that are available for novel cultivars in the U.S.
- **Protections in other countries**
- Impact of rights on freedom to operate
- Trademarks as an additional layer of protection
- Licensing novel varieties

Protections in other countries

- Plant IP rights are jurisdiction-by-jurisdiction
- Most other countries utilize a UPOV system
 - Nearly identical to the U.S. PVP system
- Need to consider where you will be growing and selling your plant material to determine where you need protection

What are we going to discuss?

- IP basics: Why do plant IP rights exist? Do they really promote progress? What do they get you?
- Types of varietal IP protection that are available for novel cultivars in the U.S.
- Protections in other countries
- **Impact of rights on freedom to operate**
- Trademarks as an additional layer of protection
- Licensing novel varieties

IP Rights and FTO

- Must consider how IP rights of others impact your “Freedom to Operate” (FTO)
- If a third party holds a PVP:
 - you may not use their protected variety to generate F1 seed for sale
 - if you develop an EDV, you need permission/agreement to commercialize
- If a third party holds a utility patent:
 - May not be able to generate an EDV or breed with the variety at all
 - U.S. utility patent does not control acts outside U.S., but may cover materials that are imported into the U.S.

What are we going to discuss?

- IP basics: Why do plant IP rights exist? Do they really promote progress? What do they get you?
- Types of varietal IP protection that are available for novel cultivars in the U.S.
- Protections in other countries
- Impact of rights on freedom to operate
- **Trademarks as an additional layer of protection**
- Licensing novel varieties

Trademarks

- Trademark protection differs in 2 key respects from variety protection:
 - Lasts indefinitely
 - Use it or lose it
- Generally useful for consumer-facing products
- Can be used for novel plant varieties
 - Cannot get a trademark on an actual variety name
 - Use an alphanumeric code for your variety name
- Can be used for downstream products of a particular plant variety

Build Your Brand Through Your Licensees

- Licenses can require the licensee to sell the plants or harvested material under particular branding
 - If you own the underlying brand, then your licensees are helping to build your brand name!
 - When variety rights expire, the brand can be so well known that licensees will keep paying license fees to sell under your brand

Build Your Brand Through Your Licensees

- Requiring patent/TM licensees to meet quality standards is OK
- For TM licenses you need to include quality standards or your TM may be lost
- Quality standards can include plant size, pot size, pot type, plant health, pest free, etc.
- Can prohibit the sale of products that do not meet quality standards, or require that they be sold under a name other than a brand name

What are we going to discuss?

- IP basics: Why do plant IP rights exist? Do they really promote progress? What do they get you?
- Types of varietal IP protection that are available for novel cultivars in the U.S.
- Protections in other countries
- Impact of rights on freedom to operate
- Trademarks as an additional layer of protection
- **Licensing novel varieties**

Licensing Plant IP Rights

- Ag/hort licensing schemes can be quite complex due to the inclusion of multiple players, multiple types of IP, and numerous distinct concerns due to ability to readily reproduce the patented invention (*i.e.*, the plant variety)
- Need to think through the entire license scheme on the front end to make sure the proper IP rights are in place
 - What are your licensees doing for you? Producing seed? Producing harvested material for consumers?
 - What activities are you trying to prohibit?
 - How will you be compensated by licensees?

Licensing Strategies

- Combine multiple types of protection to strengthen your IP position
- Control through license what you do not get through the IP rights themselves
 - Breeding
 - Ownership of downstream varieties / EDV
 - Sale of harvested material
- Use licenses to mitigate the impact of exhaustion
 - Include appropriate remedies in your licenses to ensure you can enforce the license limitations
- Require sale under your trademark

Combine Multiple Protections

- Types of IP protection are not mutually exclusive—you can get more than one type of protection
- Use PVPs and/or Utility Patents to protect the new variety
 - PVP protection can provide extended coverage, especially for plants first sold outside the U.S.
 - “Varietal” Utility Patent protection can provide patent infringement liability for breeding and can cover downstream varieties
- Use trademarks to protect your variety/brand after expiration of variety rights

Controlling Downstream Varieties Through License

- All of the available IP protections have limitations
 - Plant Patents do not stop breeding or creation of EDVs
 - PVPs do not stop breeding
 - Utility Patents do not require the patent owner to also own any downstream varieties
- You can still stop licensees from doing these things through contract

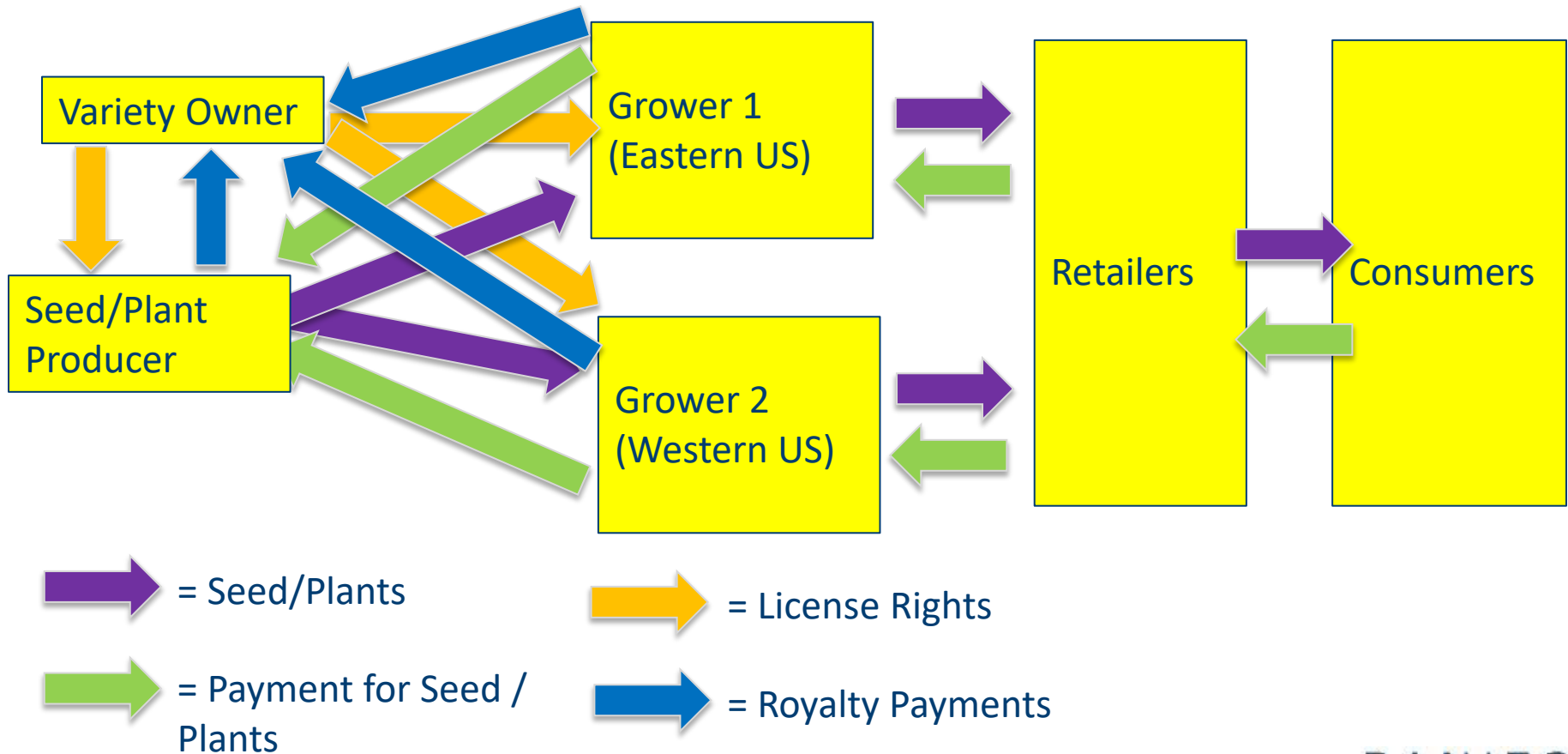
Controlling Downstream Varieties Through License

- Include license terms that stop licensees from using your variety to develop new varieties
 - Can be by any means: traditional breeding, mutation breeding, genetic engineering, etc.
- Include license terms that say the variety owner also owns any downstream varieties that are developed
 - Should say the licensee does assign and agrees to assign any varieties to you

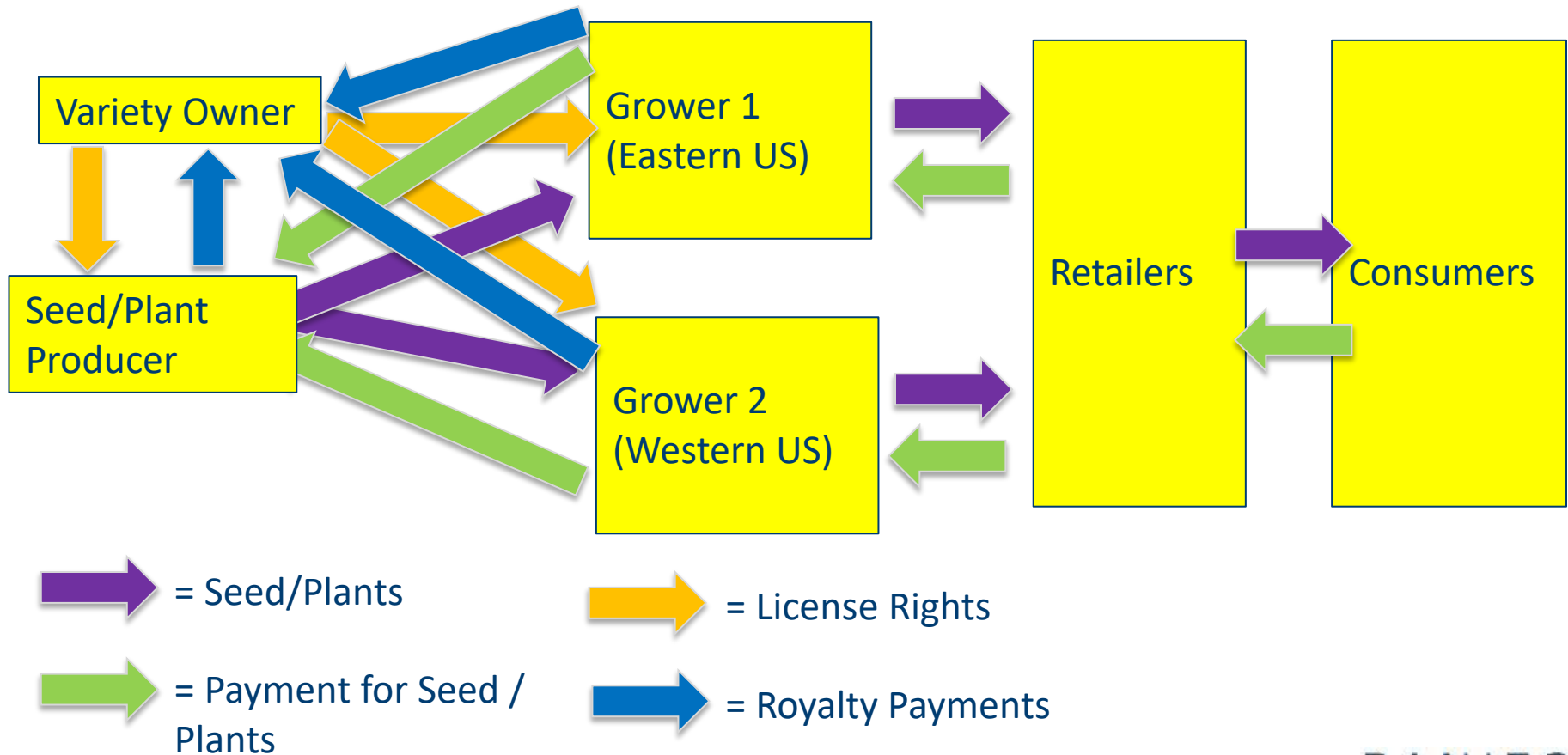
Controlling Harvested Material

- A purchaser of a protected plant is free to use that plant to produce, harvest, and sell plant material, including harvested fruit/vegetables
- Can include license provisions that restrict these activities
 - Only allow sale through approved marketing company
 - Require payment of a license fee for sales of harvested material

Example License Scheme for Production Crop



Example License Scheme for Production Crop



Bottom Line

- IP protection is available, and it is effective!
- Defense: Make sure to consider FTO issues when developing a new variety
- Offense: Develop a clear strategy and plan up front!
 - Secure appropriate protections
 - Develop licenses that plug the holes in your IP fence
 - Ensure that the licenses include the necessary provisions to be effective and maximize value

Speakers



Stephany G. Small, Ph.D.
(302) 394-6010
SSmall@panitchlaw.com



Travis W. Bliss, Ph.D.
(302) 394-6002
TBliss@panitchlaw.com

PANITCH
Intellectual Property Law
SCHWARZE



PANITCH TRAINING ACADEMY

Insights From Leaders In IP Law

Thank you for attending!

For information on all sessions in this series please visit:

<https://www.panitchlaw.com/panitch-training-academy-sessions/>