

Experiences in the USA Role of IP in Enabling the Public Sector to Deliver Public Good

Paul Zankowski
Commissioner
U.S. Plant Variety Protection Office

1

U.S. Plant Related Intellectual Property Rights Background – 3 Systems

- PVP (1)
 - USDA
 - For seed and tuber propagated plants
- Plant Patents and Utility Patents
 - Commerce Department
 - Plant patents (2) for asexually propagated varieties
 - Utility patents (3)- for all technologies

Plant IP to Benefit the Public Good

2

IP Protection → Public Good

- Reasons to Protect
- Commercialization Model
- Variety Examples
 - –UC Strawberry Story
- PVP Germplasm Deposit

Plant IP to Benefit the Public Good

3

Reasons for protecting varieties

- Facilitates technology transfer
 - Tool to assure broader use
 - Incentive for investments by private sector
- Control genetic identity & purity of the variety
- Generate revenue for the breeding program
- Protect U.S. industry against "unfair" foreign competition

Plant IP to Benefit the From Mojdeh Bahar presentation

Commercialization Model

- Most common = Licensing of PVP, Plant Patent or Utility Patent
- Licenses can be non exclusive or exclusive, determination is made on a case by case basis
- Examples:
 - Elkton Potato
 - Black Pearl Pepper
 - Sunpreme Grape
 - University of California Strawberry

Plant IP to Benefit the From Mojdeh Bahar presentation

'Elkton' Chipping Potato



1.

- Resistance to Internal Heat Necrosis
- Suitable for chipping directly from field in southern locations
- Solely owned by USDA-ARS, further tested under a CRADA, and protected by USDA Plant Variety Protection (PVP).
- Exclusively licensed to a for profit company.
- The PVP protects the commercial investment in the production of pathogen-free stock for a small, but very important, segment of potato farmers.

Plant IP to Benefit the From Mojdeh Bahar presentation

'Black Pearl' Pepper



- Unique black foliage
- Vigorous upright bushy grow habit
- Round, black fruit maturing red with very hot flavor
- Solely owned by USDA-ARS, further evaluated under a CRADA, and protected by USDA Plant Variety Protection (PVP).
- Exclusively licensed to a for profit company.
- The PVP protects the commercial investment in marketing to consumers a new type of ornamental plant.

Plant IP to Benefit the From Mojdeh Bahar presentation

'Sunpreme' Raisin Grape



- Dries on the vine naturally
- Pruning easier than typical grapes
- Raisins larger and fruitier in flavor than classical raisins
- Solely owned by USDA-ARS and protected by USPTO Plant Patent.
- Non-exclusively licensed to for profit companies.
- The USPTO Plant Patent protects the commercial investment to redesign commercial production protocols for raisins.

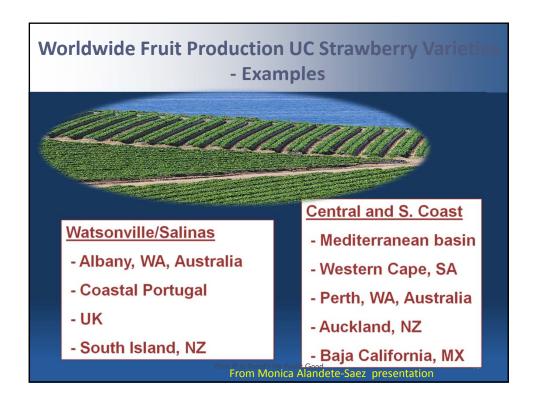
Plant IP to Benefit the From Mojdeh Bahar presentation

Strawberry Licensing Program UC Strawberries leader in California & World Strawberry Industry in California:\$2.2 B Leader, position #1, global level In 25 years, Spanish Strawberry Industry grew up to \$1B Transfer of varieties & know-how 70-90% UC Davis varieties









U.S. PVP Germplasm Deposit and Release to the Public

- PVP Requires a Deposit of Propagation Material
 - Seeds or in vitro samples (for potatoes)
 - Stored at the USDA National Laboratory for Genetic Resources Preservation (NLGRP) or acceptable repository
 - Germplasm is available only with applicant's permission through PVPO
 - Parents of hybrid varieties must also be deposited

Plant IP to Benefit the Public Good

14

Expired U.S. PVP Germplasm

- Germplasm becomes publicly available <u>after</u> the PVP certificate expires
- Expired PVP germplasm is made available throughGermplasm Resources Information Network (GRIN) (https://npgsweb.arsgrin.gov/gringlobal/search.aspx) to researchers worldwide
- 50-100 seeds are provided free of charge to a qualified requester
- This germplasm is increased as needed and maintained by the NLGRP

Plant IP to Benefit the Public Good

15

IP Protection → Public Good

- Variety Examples
- PVP Germplasm Deposit

Plant IP to Benefit the Public Good

16

