

USDA Invention Licensing and Plant Variety Protection

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United States Department Of Agriculture
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Overview

- USDA invention licensing policies
- Protection and licensing of USDA plant varieties
- Plant variety protection available under the UPOV Convention

Purpose of U.S. Federal Laboratory Invention Management Programs

- Advance public policy goals
- Facilitate technology transfer
- Support small business development and entrepreneurial activity
- Promote technology-based economic development
- Support investments by U.S. businesses in international markets

What inventions can be licensed by U.S. Federal Labs?

- “Inventions,” as defined in 35 U.S.C. 201
- Patents and patent applications (including plant patents)
- Plant Variety Protection Certificates
- International equivalents
- Biological materials (“any invention which *may* be patentable”) - Examples include hybridomas, cell cultures, microbial isolates

ARS

National Patent Committees

- Three national committees:
 - National Life Sciences Patent Committee
 - National Chemical Patent Committee
 - National Mechanical & Measurements Patent Committee
- Each committee meets quarterly to review new invention reports.
- Committees are comprised of ARS scientists.
- Each case is presented by an in-depth reviewer.
- Committee members vote on each invention.

Patent Committee Evaluation Criteria

1. Is there current commercial interest in the invention or a high probability of commercialization in the future?
2. Is the magnitude of the market relative to the costs of commercialization large enough to warrant a patent?
3. Would the patent likely play a significant role in transferring the technology to the user beyond what could be achieved through publication?
4. Would a patent on this invention be enforceable; i.e., is the invention drawn to, or does it employ, a unique and readily identifiable material or device which could be bought or sold?
5. Is the invention of sufficient scope to justify patenting?

A Wide Variety of ARS Technologies Are Patented and Licensed

- Veterinary diagnostics, vaccines and therapeutics
- Crop protection products, including biological pest control agents
- Food technologies
- New materials from agricultural products and by-products
- Textile finishing chemistries
- Farm equipment
- Plant varieties

Protection of Plant Varieties Developed by ARS Breeders

- Improved germplasm and advanced selections are usually publicly released.
- Many new varieties are co-developed and co-owned with U.S. land grant universities. Decisions regarding variety protection and licensing are made jointly with university technology transfer officers.
- New varieties developed solely by ARS are protected only if such protection will facilitate technology transfer.

ARS

Plant Variety Committee

- The committee reviews new plant varieties to be considered for plant variety protection.
- The committee meets quarterly, or on an *ad hoc* basis, if needed.
- Committees are comprised of Office of National Program staff, OTT staff, and ARS line managers.
- Each variety is presented by the breeder.
- Committee decisions are made by consensus.

Plant Variety Committee Evaluation Criteria

1. How is the variety different from and/or better than the closest currently available variety?
2. Is there current commercial interest in the variety or a high probability of commercialization in the future?
3. Is the potential market for the variety of sufficient size to warrant variety protection?
4. Would variety protection likely play a significant role in making the variety available to growers and consumers beyond what could be achieved through public release?
5. Have key stakeholders, such as commodity groups, growers, university partners, seed companies and nurseries, been consulted about protection of the variety?

USDA Plant Variety Licenses

“The license granted is subject to the reservation by USDA of an irrevocable, nonexclusive, nontransferable, royalty-free license for use of the Licensed Variety throughout the world by or on behalf of the U.S. Government and on behalf of any foreign government pursuant to **any existing or future treaty or agreement to which the United States is a signatory**, including **the right to engage in research**, either alone or with one or more third parties, with the Licensed Variety. USDA reserves the right to **make propagation material of the Licensed Variety available to third parties for breeding purposes.**”

Plant Variety Protection

International Considerations

The International Union for the Protection of New Varieties of Plants (UPOV Convention)

- *What is UPOV ? What are the UPOV missions ?*
- *What can be protected by the UPOV convention ?*
- *What are the breeder's rights ? The exceptions ?*
- *Major differences between 1978 Act and 1991 Act.*

UPOV Members

MAJOR GRAPE-PRODUCING COUNTRIES

Argentina (1978 Act)

Australia (1991 Act)

Brazil (1978 Act)

Canada (1978 Act)

USA (1991 Act)

Chile (1978 Act)

France (1978 Act)

South Africa (1978 Act)

Italy (1978 Act)

Spain (1991 Act)

China (1978 Act)

Mexico (1978 Act)

Turkey (1991 Act)

Variety Protection in the U.S.

- There are two forms of variety protection in the U.S.:
 1. Seed propagated varieties and tubers are protected by Plant Variety Protection Certificates (PVPCs).
 2. Clonally propagated varieties are protected by Plant Patents.
- It is possible to obtain a PVPC, a Plant Patent, and a Utility Patent for the same plant variety.
- The type of protection sought in the U.S. is dictated primarily by the specific business requirements of the variety owner.

Example: Fruit Tree Rootstock Variety Protection

- In the U.S:
 - The variety can be protected by PVPC based on seed propagation of the rootstock.
 - The same variety can also be protected by Plant Patent based on tissue culture propagation of the rootstock.
 - In theory, the same variety could be protected by Utility Patent based on a deposited seed sample.
- In Europe:
 - The variety can be protected by Plant Breeder's Rights.



US00PP16284P2

(12) **United States Plant Patent**
Ramming et al.

(10) **Patent No.:** **US PP16,284 P2**
(45) **Date of Patent:** **Feb. 21, 2006**

(54) **GRAPEVINE DENOMINATED ‘AUTUMN KING’**

(50) Latin Name: *Vitis vinifera L.*
Varietal Denomination: **Autumn King**

(75) Inventors: **David W. Ramming**, Fresno, CA (US);
Ronald E. Tarailo, Fresno, CA (US)

(73) Assignee: **The United States of America as represented by the Secretary of Agriculture**, Washington, DC (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 161 days.

(21) Appl. No.: **10/953,387**

(22) Filed: **Sep. 28, 2004**

(51) **Int. Cl.**
A01H 5/00 (2006.01)

(52) **U.S. Cl.** **Plt./207**

(58) **Field of Classification Search** **Plt./207**
See application file for complete search history.

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PUBLICATIONS

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(57) **ABSTRACT**

A new and distinct variety of grapevine denominated ‘Autumn King’ which is characterized by its late season ripening seedless fruit, attractive pale green coloration, its cylindrical to ovoid fruit shape, its firm fruit texture with neutral sweet flavor, and its medium to tight cluster.

2 Drawing Sheets

'Valley Pearl'



Additional Information

Plant Variety Protection

- The UPOV Website :
<http://www.upov.int/portal/index.html.en>
- Texts of the acts of the UPOV Convention :
<http://www.upov.int/upovlex/en/acts.html>
- *PVP Act and Regulations and Rules of Practice* :
<http://www.ams.usda.gov/AMSV1.0/getfile?dDocName=STELDEV3002796>
- *More information about the Plant Patent* :
<http://www.uspto.gov/web/offices/pac/plant/>

Additional Information

ARS and OTT

USDA, ARS Website

<http://www.ars.usda.gov/main/main.htm>

Partnering Website (OTT activities)

<http://www.ars.usda.gov/Business/Business.htm>