

# Seed Law: What We Need to Know

David Francis

[francis.77@osu.edu](mailto:francis.77@osu.edu)

# 1) Botany Basics

Mating systems

Genetic Variation

# 2) Germplasm Resources

# 3) Seed law

a. Why, What?

b. Seed sharing and seed law

c. Proposed changes to Ohio law

d. Plant Variety Protection (PVP)

e. Seed germination and testing

f. Seed storage

# Why do we have laws about seed?

↻ CGIAR Retweeted



**CIAT**  @CIAT\_ · Oct 1

#IfYouMissedIt: Profitable agricultural business require good seed! How we get better seed to farmers @CIAT\_Africa [bit.ly/2yF25bb](https://bit.ly/2yF25bb)



- To protect farmers
- Ensure seeds are viable & will grow the intended plant variety
- Ensure seeds are not mixed with weed seeds

Enacted in 1939, the **Federal Seed Act** requires accurate labeling and purity standards for seeds in commerce, and prohibits the importation and movement of adulterated or misbranded seeds. The law (P.L. 76-354) works in conjunction with the Plant Protection Act of 2000 to authorize the Animal and Plant Health Inspection Service (APHIS) to regulate the importation of field crop, pasture and forage, or vegetable seed that may contain noxious weed seeds. USDA's Agricultural Marketing Service is responsible for enforcing the labeling and purity standard provisions

From ASTA (<http://www.betterseed.org/>)

Accurate Labeling

Purity Standards

Regulate importation (prevent weed and pathogen spread)

# Who writes the laws?

Association of American Seed Control Officials (AASCO) consists of seed regulatory officials from the United States and Canada, organized in 1949. AASCO updates the Recommended Uniform State Seed Law (RUSL) which they developed and maintain as a "model" law for states and federal programs (See: <http://www.seedcontrol.org/> )

R U S S L

RECOMMENDED UNIFORM STATE SEED LAW

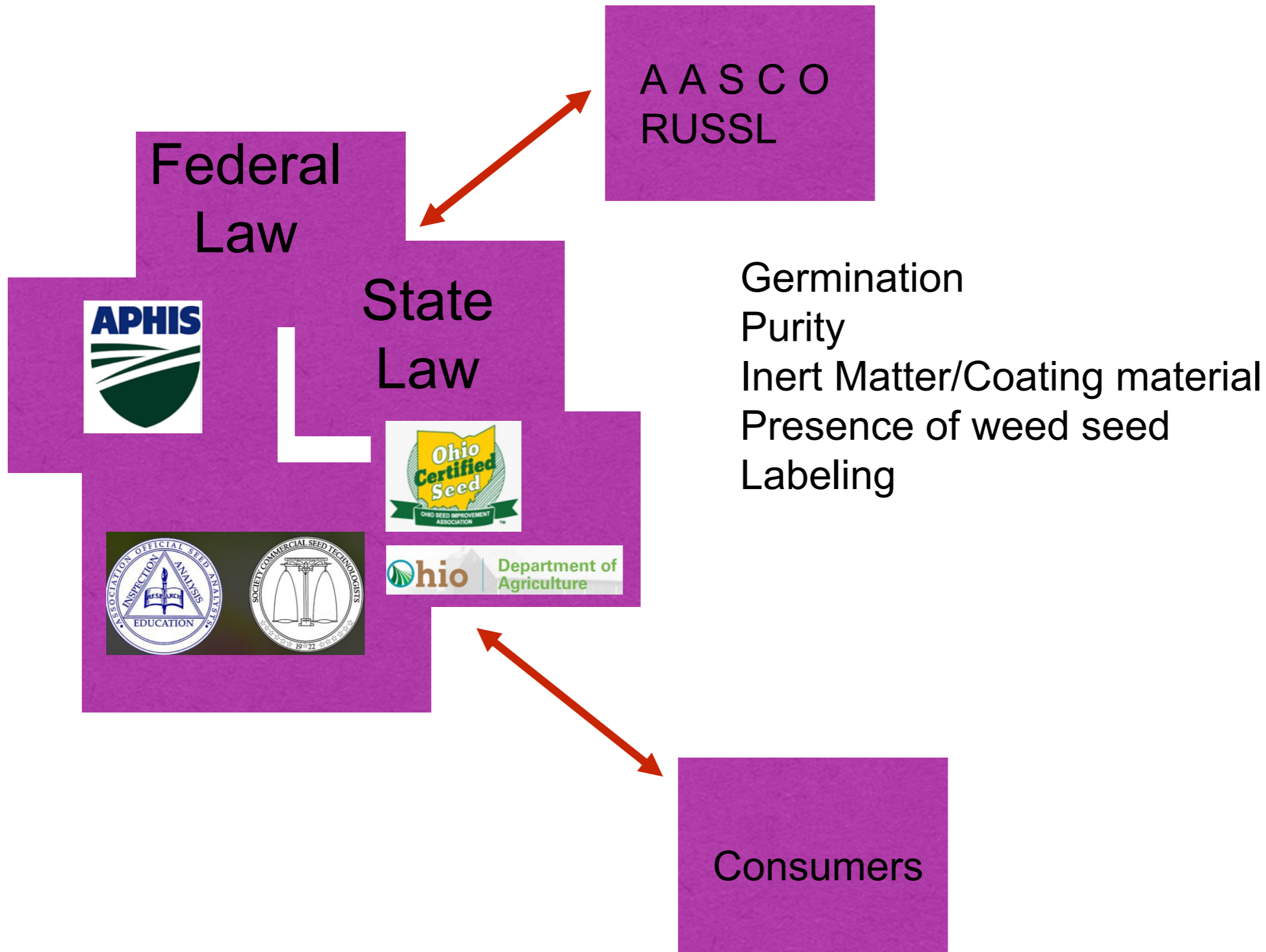
(<http://www.seedcontrol.org/rusl.html>)

Ohio Revised Code Chapter 907: AGRICULTURAL SEED  
(907.01-907.17; <http://codes.ohio.gov/orc/907>)

Ohio law is modeled on RUSL

Goal:

To protect consumers and farmers, ensure seeds are viable, will grow the intended plant and are not mixed with weed seed or unwanted plants.





APHIS Charged with  
Fed. Enforcement

A A S C O  
R U S S L

Federal  
Law

State  
Law

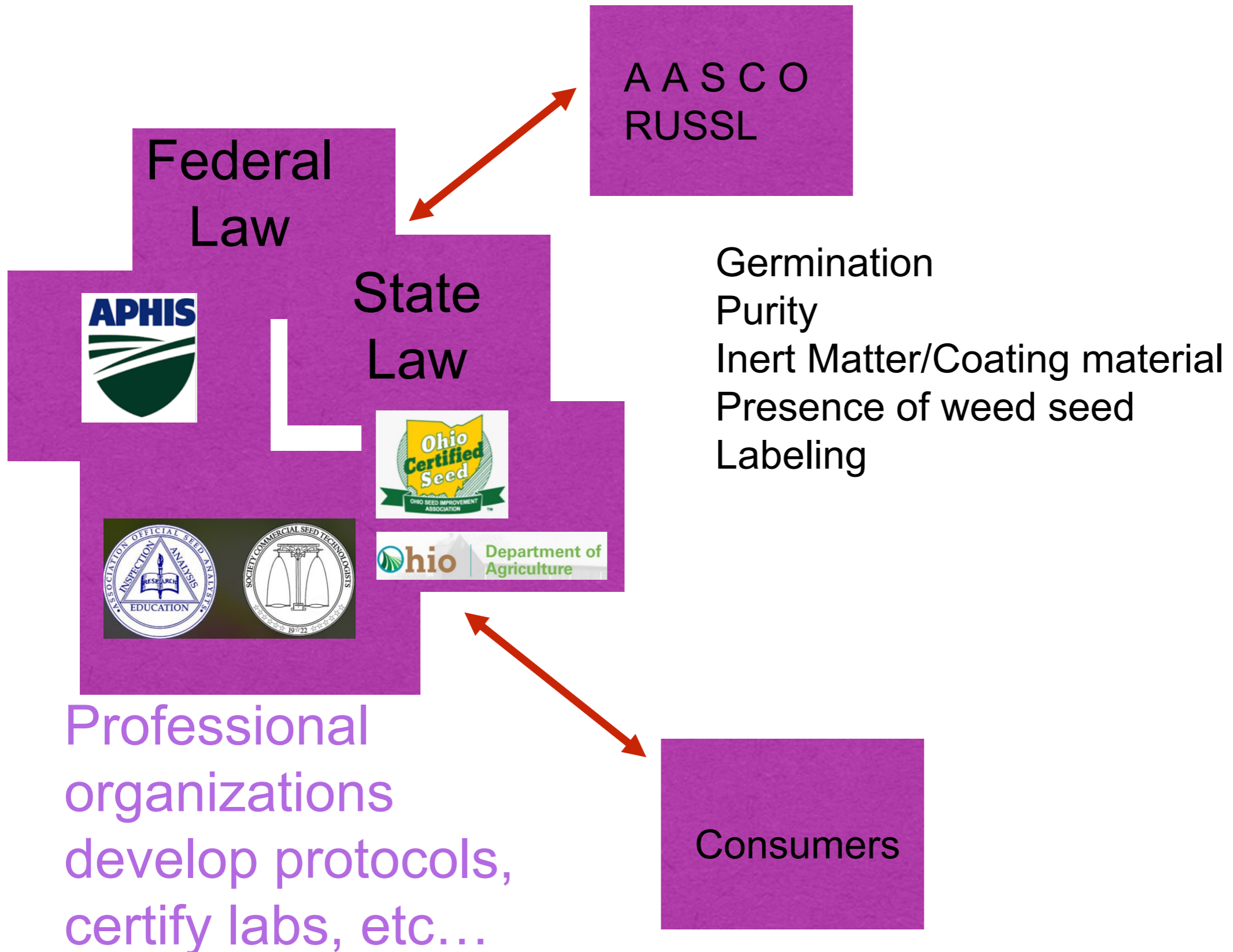
Germination  
Purity  
Inert Matter/Coating material  
Presence of weed seed  
Labeling



ODA charged w/  
State enforcement  
and OSIA charged  
w/ testing and  
certification of seed

Consumers





# AOSA Seed Testing Rules & Handbooks

+ **AOSA Rules for Testing Seeds**

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+ **Seed Vigor Testing Handbook**

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+ **Seed Moisture Testing Handbook**

---

+ **Cultivar Purity Handbook**

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+ **Tetrazolium Testing Handbook**

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+ **HOW TO ORDER**

Association of Official Seed Analysts & Society of Commercial Seed Technologists

<http://www.analyzeseeds.com/publications/>

# Seed Sharing and Seed Law

- Simpson Library Case in Pennsylvania: State interpreted exchange to fall under 2004 Seed Act, regulates the sale and distribution of seeds.
- Unlawful to sell or offer for sale seeds that have not been tested to determine the percentage of germination; contain prohibited noxious weeds; are not properly labeled; or have been advertised in a misleading manner.
- “sales of seeds” was interpreted to include exchanges, where no money changes hands.
- Described as “aggressive education and enforcement action”. (J. Armstrong, OSIA)

See article by Brian Lisik

<https://www.farmanddairy.com/news/swapping-seeds-theres-law/242774.html>

Trish Popovitch

<http://seedstock.com/2015/05/03/the-little-library-that-could-advocates-change-seed-exchange-laws-in-minnesota/>

# Why would states regulate seed sharing as a “selling”?

- protect intellectual property rights of variety originators
- concern regarding noxious weed species such as Palmer Amaranth (recently found in conservation and ornamental pollinator seed mixtures)

State-by-state approach to changing seed laws

Sustainable Economies Law Center:

Redefine “sell” to reflect the plain meaning

Exempt non-commercial seed sharing from

Labeling requirements (907.03, 907.07, 907.08)

Seed labeler’s permits and fees (907.13, 907.14)

Record maintenance requirements (907.04)

Exempt micro-enterprises (sales <\$10,000) from requirements as above.

https://hackpad.com/  
About-the-Seed-Law-  
Tool-Shed-  
tyGDxRK8uO3

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We've started automatically migrating pads, and Hackpad will be shut down once the migration is complete.

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HACKPAD



## About the Seed Law Tool Shed

This is a collaborative space to compile information about state seed laws, particularly to examine how they apply to seed libraries.

### How to contribute to the Seed Law Tool Shed:

1. **Find your state:** Look at the list of states below and select the state you would like to contribute to.
2. **Add links to the state statutes and regulations on seeds:** Also give the specific sections of code (i.e. Section 7104 of...), since links quickly become outdated.
3. **Copy and paste in provisions that you find to be particularly relevant:** In particular, paragraphs that define who must comply with the law, relevant definitions, and relevant exemptions.
4. **Comment and ask questions:** Add notes on how you think the law might be interpreted, ask questions, and leave notes on areas for further research.
5. **Read this disclaimer:** Neither Janelle Orsi, nor Shareable, nor the Sustainable Economies Law Center, nor anyone else posting on this Hackpad can be sure that this information is correct and up to date! We did not do germination testing, vigor testing, accelerated aging testing, or anything else to ensure that this is good law.

https://hackpad.com/About-the-Seed-Law-Tool-Shed-tyGDxRK8uO3

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901 DAYS AGO

Edited by NEIL THAPAR UNFILED

# Ohio Seed Law

[Text of Ohio Seed Law](#) | [Text of Ohio Seed Rules](#)

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od law.

# What about RUSSEL?

July 2016 RUSSEL Amendment defines a term agreed upon by our working group, Non-Commercial Seed Sharing, as:

(v) “Non-commercial Seed Sharing” – means that no monetary consideration or compensation may be transferred in return for receiving seeds. Additionally, anyone distributing seeds under the rules of this definition may not expect, or create the expectation, that seeds must be returned in exchange for receiving seeds. If distribution of seeds is found to be in anticipation or connected to money paid for work or services rendered by the same person distributing seeds, such distribution shall not be considered non-commercial within these rules.

## Defines “Non-commercial Seed Sharing”

[http://www.seedcontrol.org/pdf/russl\\_2016.pdf](http://www.seedcontrol.org/pdf/russl_2016.pdf)



# Defines labeling requirements for seed sharing

[http://www.seedcontrol.org/pdf/russl\\_2016.pdf](http://www.seedcontrol.org/pdf/russl_2016.pdf)

## SECTION 2B. Label and educational requirements for Non-Commercial Seed Sharing.

(A) Each container of agricultural, vegetable, and flower seeds distributed for sowing purposes in a non-commercial setting shall bear thereon or have attached thereto in

a conspicuous place a plainly written or printed label or tag in the English language, conveying the following information:

- (a) The name of the species or commonly accepted name of kind or kind and variety of each agricultural seed component present. Hybrids shall be labeled as hybrids.
- (b) A word or statement indicating if the seed has been treated. And, if treated, must be labeled in accordance with applicable state and federal laws.
- (c) Some form of reference identification that provides traceability. Retention of posterity file samples are not required.
- (d) Name and city or address of the non-commercial seed sharing entity.
- (e) The calendar month and year the seed was donated.
- (f) The seed shall be free of foreign material, other than coatings or treatments, including germination medium, mulch, fertilizer, pre-planted containers, mats, tapes, or other planting devices.
- (g) No distributed container shall hold more than eight (8) ounces of agricultural seed or four (4) ounces of vegetable or flower seed.
- (h) Germination and purity analysis is not required, however if a germination or purity percentage is noted on the label, it must be noted whether or not the analysis was performed according to the AOSA rules for testing seed.

# 2016 RUSSL amendment adds a series of regulatory exemptions

(B) At each location involved with non-commercial seed sharing a legible and visible sign shall state that the seeds being distributed may not meet germination or varietal purity standards prescribed by the state seed law. The sign must also state that patented seed or varieties protected by the Plant Variety Protection Act will not be accepted or distributed without permission of the certificate holder.

**Defines signage and exclusion of PVP protected material**

[http://www.seedcontrol.org/pdf/russl\\_2016.pdf](http://www.seedcontrol.org/pdf/russl_2016.pdf)

**Plant Variety Protection Act (PVP)**, enacted in 1970 and amended in 1994 to include potatoes and other tuber crops, PVP is a voluntary program that provides rights to breeders, developers and owners of plant varieties. The PVP gives breeders 20-25 years of exclusive control over new, distinct, uniform, and stable sexually reproduced or tuber propagated plant varieties.

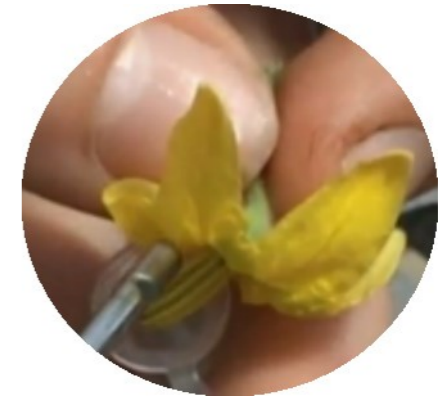
From ASTA (<http://www.betterseed.org/>)

3 types of intellectual property protection for new plant varieties in the U.S.:

- Plant Variety Protection - seed and tubers (issued by PVPO)
- Plant Patents - asexually propagated plants except for edible tubers (issued by the Patent and Trademark Office (PTO))
- Utility Patents - for genes, traits, methods, plant parts, or varieties (issued by the PTO)

# Plant Variety Protection(PVP)

- Farmers can save seed for personal use
- Farmers cannot sell seed
- No restrictions on breeding (crossing with other varieties, and selecting among progeny)



Plant Patents and Utility Patents restrict both seed saving and breeding



# Seed Law also mandates labeling requirements. What's on a label?

**ANALYSIS TAG**

Kind: \_\_\_\_\_

Variety: \_\_\_\_\_

Origin: \_\_\_\_\_

Net Weight (lbs): \_\_\_\_\_

Pure Seed (%): \_\_\_\_\_

Inert Matter (%): \_\_\_\_\_

Other Crop Seed (%): \_\_\_\_\_

Weed Seed (%): \_\_\_\_\_

Germination (%): \_\_\_\_\_

Hard Seed (%): \_\_\_\_\_

Test date: \_\_\_\_\_

Noxious Weed/lb: \_\_\_\_\_

Lot Number: \_\_\_\_\_

Vendor: \_\_\_\_\_

### What's on a Label?

<p style="text-align: center; border: 1px solid orange; border-radius: 50%; padding: 2px;"><b>ABC 123 Brand</b></p> <p>Kind: Corn</p> <p style="border: 1px solid orange; border-radius: 50%; padding: 2px;">Variety: 1234</p> <p>Lot number: 789</p> <p>Pure seed: 98%</p> <p>Weed seed: 1%</p> <p>Other crop: 1%</p> <p>Germination: 95%</p> <p>Hard (dormant) seed (if present): n/a</p> <p>Total: germination plus hard (dormant) seed (optional): n/a</p> <p>Noxious weed seeds: 0.0%</p>	<p>Number per pound: 1,379.3</p> <p>Origin (state or foreign country): Iowa</p> <p>Germination Test Date: 3/26/16</p> <p>For hybrid field corn relative maturity: 102 day</p> <p>Net weight: 58 lb.</p> <p>Labeler's name: Company Name</p> <p>Labeler's mailing address: 123 Elm St. Anywhere, NE 12345</p>
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**The "brand" name is optional.** It typically identifies the company marketing the seed. The brand name might be on the label as long as it is not misleading or can't be confused with a variety name.

**The seed "variety" is required on labels** and refers to a subdivision of a "kind," which is distinct, uniform, stable and possesses certain characteristics.

Seed labels are required to provide certain important information to farmers, such as variety and brand name. These two descriptors are important to tell apart. Check variety name on each unit you buy and compare it with others, even from different companies, to ensure genetic diversity. While you're looking at the label, check germination rates and testing dates to set expectations in your fields. If you have any questions about what you see on the label, talk to your seed rep, who should be able to address your concerns.

See "Same Seed Different Bag"  
<https://www.agweb.com/article/same-seed-different-bag-naa-sonja-begemann/>

See module on germplasm resources

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Inert Matter (%): \_\_\_\_\_

Other Crop Seed (%): \_\_\_\_\_

Weed Seed (%): \_\_\_\_\_

Germination (%): \_\_\_\_\_

Hard Seed (%): \_\_\_\_\_

Test date: \_\_\_\_\_

Noxious Weed/lb: \_\_\_\_\_

**ABC 123 Brand**

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Other crop: 1%	Labeler's name: Company Name
Germination: 95%	Labeler's mailing address: 123 Elm St. Anywhere, NE 12345
Hard (dormant) seed (if present): n/a	
Total: germination plus hard (dormant) seed (optional): n/a	
Noxious weed seeds: 0.0%	

## What's on a Label?

The "brand" name is optional. It typically identifies the company marketing the seed. The brand name might be on the label as long as it is not misleading or can't be confused with a variety name.

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### 901:5-27-03 Labeling seed as to kind and variety.

Seed kinds labeled with a brand name and not a variety name shall be labeled with the phrase "variety not stated." Varieties of the following kinds of seeds are generally labeled as to variety and shall be labeled as to kind and variety or, in lieu of the variety name, the phrase "variety not stated," or "VNS":

## Home Germination Tests

### Seed Germination (Southern Exposure Seed Exchange)

<https://www.southernexposure.com/how-to-test-germination-ezp-162.html>

## Seed Savers Exchange

[http://seedsavers.org/site/pdf/HomeGermTests\\_LAFrevised.pdf](http://seedsavers.org/site/pdf/HomeGermTests_LAFrevised.pdf)

## High Mowing Organic Seeds

<https://www.highmowingseeds.com/blog/how-to-do-a-quick-germination-test-at-home/>

## Professional Guidelines

[http://www.analyze-seeds.com/wp-content/uploads/2016/08/ROA\\_Handbook.pdf](http://www.analyze-seeds.com/wp-content/uploads/2016/08/ROA_Handbook.pdf)

<https://www.nist.gov/sites/default/files/documents/2017/04/28/11-appd-11-hb133-final.pdf>

The image shows a PDF viewer interface. The top toolbar includes a search icon, a list icon, a page indicator '1 of 6', zoom controls, and a print icon. The left sidebar shows a 'Table of Contents' with the following items:

- Appendix D. AOSA Rules for Testing Seeds
  - AOSA Rules for Testing Seeds – Section 2: Preparation of Working Samples
    - SECTION 2: PREPARATION OF WORKING SAMPLES
      - 2.1 Definitions
      - 2.2 Obtaining the working sample
      - 2.3 Size of working samples.
  - AOSA Rules for Testing Seeds – Section 12: Mechanical Seed Count
  - Volume 1. Principles and Procedures

The main content area displays the title page of the document:

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## Appendix D. AOSA Rules for Testing Seeds

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### AOSA Rules for Testing Seeds – Section 2: Preparation of Working Samples

Volume 1. Principles and Procedures

(Provided by the Association of Official Seed Analyst)

#### SECTION 2: PREPARATION OF WORKING SAMPLES

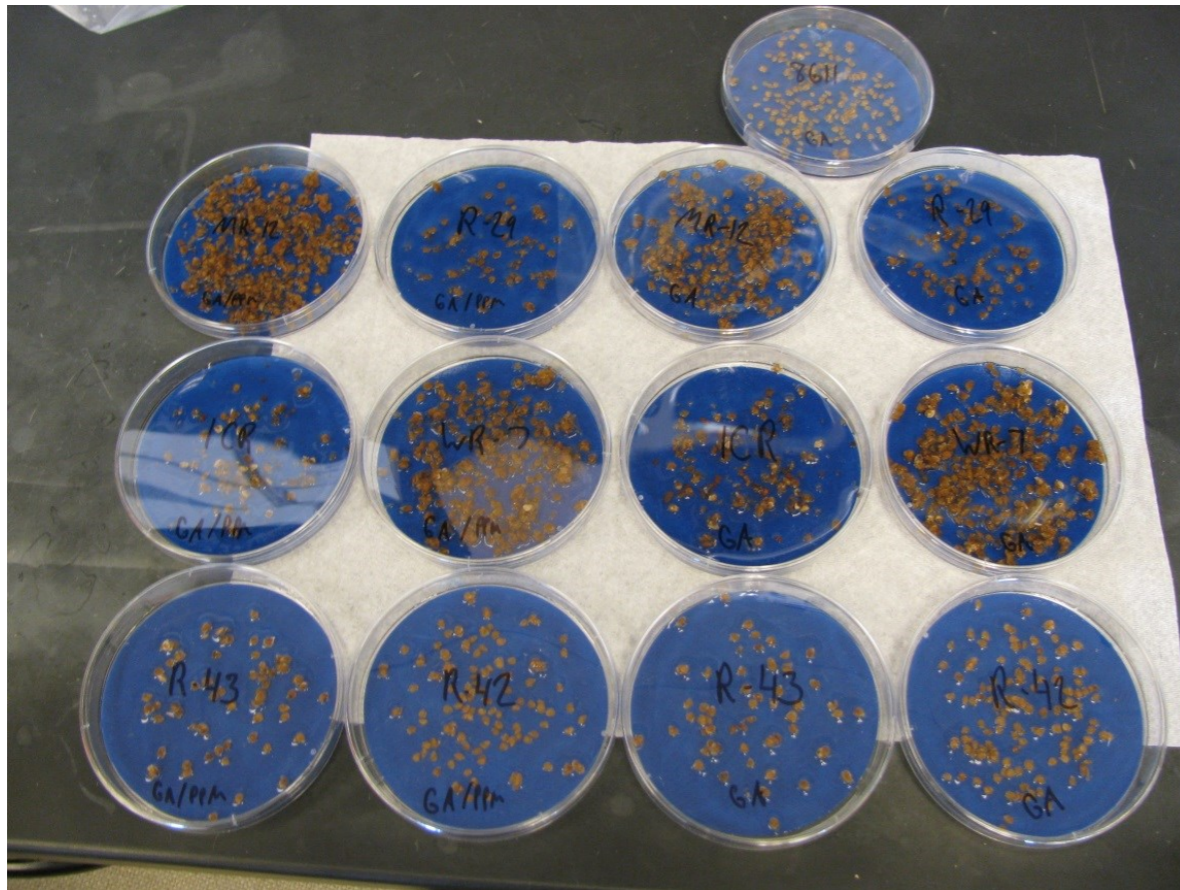
The laboratory analysis for law enforcement, labeling, and general information as to seed quality, should determine the following for the sample analyzed: (1) the purity composition, (2) the rate of occurrence of noxious-weed seeds per unit weight, and (3) the percentage germination of the pure seed under

Presentation Credit: Dr. David Francis, The Ohio State University

# Germination Tests

Federal Law Sets Standards by Plant

Testing Protocols Set by Professional Organizations





**§201.31 Germination standards for vegetable seeds in interstate commerce.**

The following germination standards for vegetable seeds in interstate commerce, which shall be construed to include hard seed, are determined and established under section 403(c) of the act:

	<b>Percent</b>
Artichoke	60
Asparagus	70
Asparagusbean	75
Bean, garden	70
Bean, lima	70
Bean, runner	75
Beet	65
Broadbean	75
Broccoli	75
Brussels sprouts	70
Burdock, great	60
Cabbage	75
Cabbage, tronchuda	70
Cardoon	60
Carrot	55
Cauliflower	75
Celeriac	55
Celery	55
Chard, Swiss	65
Chicory	65
Chinese cabbage	75
Chives	50
Citron	65
Collards	80
Corn, sweet	75
Cornsalad	70
Cowpea	75
Cress, garden	75
Cress, upland	60
Cress, water	40
Cucumber	80

<https://www.ams.usda.gov/rules-regulations/fsa>

# Seed Storage



Cool, dry, protect from insects and rodents  
(desiccant, moth balls or no-pest strip)

**GERMINATION TEST DATE REQUIREMENTS**

	LAW	REGS	W	R	HW	HR	REMARKS
ALABAMA	1963	1963		9		36	
ALASKA	1954	1954		5			REFERENCES FEDERAL SEED ACT
ARIZONA	1973	1973		9			
ARKANSAS	1976	1991		9			
CALIFORNIA	1972	1972	8	15	18	36	
COLORADO	1973	1973		12		24	
CONNECTICUT	1963	1963		9			NEW TEST SAMPLE SHALL BE TAKEN FROM STOCK AT POINT OF SALE
DELAWARE	1969	1969		9			
FLORIDA	1945	1945		7	18	24	
GEORGIA	1956	1956		9			
HAWAII	1955	1974		9		36	WITH EXCEPTIONS
IDAHO	1951	1951		15			
ILLINOIS	1972	1975		9		36	
INDIANA	1986	1958		9			
IOWA	1966	1966		9			
KANSAS	1971	1971		9			
KENTUCKY	1956	1956		9	18	24	
LOUISIANA	1975	1975		5			8 OZ PACKETS - 9 MONTHS
MAINE	1964	1964		9			
MARYLAND	1957	1957		9			
MASSACHUSETTS	1975	1975		9			
MICHIGAN	1965	1965		11		36	WITH EXCEPTIONS FOR SPECIAL SEALING AND PACKAGING All agricultural seeds have a twelve month test date and/or sell by date provision. Lawn and turf grass seeds are fifteen months. Native grass and wildflower seeds when sold for use in conservation plantings have a fifteen month test date and/or sell by date. Vegetable and flower seeds may be sold by test date, packed for date, or sell by date and the period is twelve months from the date of test or the year packed for sale in.
MINNESOTA	1999	1999	12	12		36	
MISSISSIPPI	1968	1969		9			
MISSOURI	1957	1957		8			
MONTANA	1973	1973		9*	18	36	* WITHIN 12 MONTHS AFTER HARVEST
NEBRASKA	1969	1969		9			
NEVADA	1969	1969	18	18	36	36	
NEW HAMPSHIRE	1943	1965		9			
NEW JERSEY	1968	1969		9			
NEW MEXICO	1967	1968		9			
NEW YORK	1955	1960		9			
NORTH CAROLINA	1971	1975		9			
NORTH DAKOTA	1973	1973		9		36	
OHIO	1974	1965		9		36	
OKLAHOMA	1971	1975		9		36	
OREGON	1973	1975		18	18	36	
PENNSYLVANIA	1965	1966		9		36	
RHODE ISLAND	1956	1956		9			
SOUTH CAROLINA	1967	1963		9		36	
SOUTH DAKOTA	1965	1965		9			
TENNESSEE	1972	1972		9*		36	*WITHIN 9 MONTHS AFTER HARVEST
TEXAS	1941	1971		9		36	
UTAH	1971	1972		9		36	
VERMONT	1971	1971					
VIRGINIA	1994	1991		9			
WASHINGTON	1989	2001		15	36	36	EXCEPTIONS FOR SPECIAL PACKAGING
WEST VIRGINIA	1967	1975		12		36	
WISCONSIN	1969	1969		12		36	
WYOMING	1957	1957		5			REFERENCES FEDERAL SEED ACT Includes District of Columbia, Guam, Puerto Rico and U.S. Territories and possessions. *15 MONTHS FOR CERTAIN GRASS SEEDS.
FEDERAL SEED ACT	1998	2000		5*		24	

W = WHOLESale  
R = RETAIL  
HW & HR = HERMETICALLY SEALED, WHOLESale AND RETAIL

Germination test date requirements:

Ohio 9 Mo at retail, 36 Mo if hermetically sealed

<https://www.ams.usda.gov/sites/default/files/media/GerminationTestReq%5B1%5D.pdf>

## Seed Resources

### **Association of Official Seed Analysts (AOSA)**

<http://www.analyzeseeds.com/>

### **International Seed testing Association (ISTA)**

<https://www.seedtest.org/en/home.html>

### **American Seed Trade Association (ASTA)**

<http://www.betterseed.org/resources/seed-testing-accreditation-schemes/>

### **ASTA information on seed law**

<http://www.betterseed.org/wp-content/uploads/Laws-Regs-Other-Considerations-when-Buying-Seed.pdf>

### **Ohio Seed law**

#### **Chapter 907: Agricultural Seed**

<http://codes.ohio.gov/orc/907>

### **Seed and Seed Quality (NC State Extension)**

<https://content.ces.ncsu.edu/seed-and-seed-quality>

### **Swapping Seeds? There's a law for that.**

<https://www.farmanddairy.com/news/swapping-seeds-theres-law/242774.html>

### **Same Seed Different Bag**

<https://www.agweb.com/article/same-seed-different-bag-naa-sonja-begemann/>

## Take home messages--

- Seed laws exist to protect the user and inventor
- Seed laws exist to reduce the spread of weed seed and pathogens
- It may be necessary to amend Ohio seed law to recognize seed sharing and seed exchanges
- Seed exchanges should pay attention to labeling and signage suggestions in the 2016 RUSSEL amendment
- Germination tests and proper storage can insure quality seed

**Your thoughts or questions?**

