



Bundessortenamt



Deutsch-Kasachischer Agrarpolitischer Dialog  
Германо-Казакстандық аграрно-политикалық диалог

With support from



Federal Ministry  
of Food  
and Agriculture

by decision of the  
German Bundestag

# Plant Variety and Seed Legislation in Germany





- Historical overview
- Plant breeding sector
- Variety and seed legislation - Germany
- Federal Plant Variety Office
- Federal States Tasks
- Variety and seed legislation – EU



# HISTORICAL SUMMARY





## Milestones in the development of the **German Plant Breeding Sector**

1856

- Gregor Mendel started cross-breeding experiments

1875

- Start of cross-breeding in **wheat**

1880

- **Rye** breeding starts

1889

- first lecture on plant breeding

1910

- 221 independent breeding companies and specialized seed production companies and cooperatives



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## Milestones in the development of the **German Plant Breeding Sector**

- ∅ First varieties had great economic success
- ∅ Along with the breeding progress various problems evolved simultaneously
  - ∅ Plagiarized varieties were created
  - ∅ Often of inferior quality
  - ∅ Resulting in “varietal confusion”
- ✓ Problem for breeders:
  - § lack of legal protection for their varieties
- ✓ Problem for farmers:
  - § lack of security in regards to varietal identity and seed quality



## Milestones in the development of the **German Seed Legislation**

1869

- first seed control station in the world in Saxony
  - ∅ objective: improvement of seed quality (Friedrich Nobbe)

1884/85

- ∅ German Agricultural Society (DLG)
  - Department for seed quality and plant breeding
    - Seed certification of vegetables
    - Variety trials
    - plant breeding of forage species

1888

- Comparative variety trials throughout Germany and publication of results

1896

- private seed certification system

1905

- "DLG Register of Plant Varieties"



## Milestones in the development of the **German Seed Legislation**

**1920's**

- Increasing governmental involvement

**1934**

- Regulation on Seed
  - Basic Rules on Seed Certification and listing of new plant varieties
  - List of varieties (“Reichssortenregister”)
    - ∅ „Varietal inventory“:  
removal of synonyms, compilation of very similar varieties
  - Conduction of performance trials on numerous locations

**1953**

„Gesetz über **Sortenschutz** und **Saatgut von Kulturpflanzen**“  
(Saatgutgesetz)

“Law on **plant variety protection** and **seed of crops**”





## Milestones in the development of the **German Seed Legislation**

**1953**

### Ø **Bundessortenamt (Federal Plant Variety Office)**

- Established as independent Federal Authority
- Headquarters: Rethmar





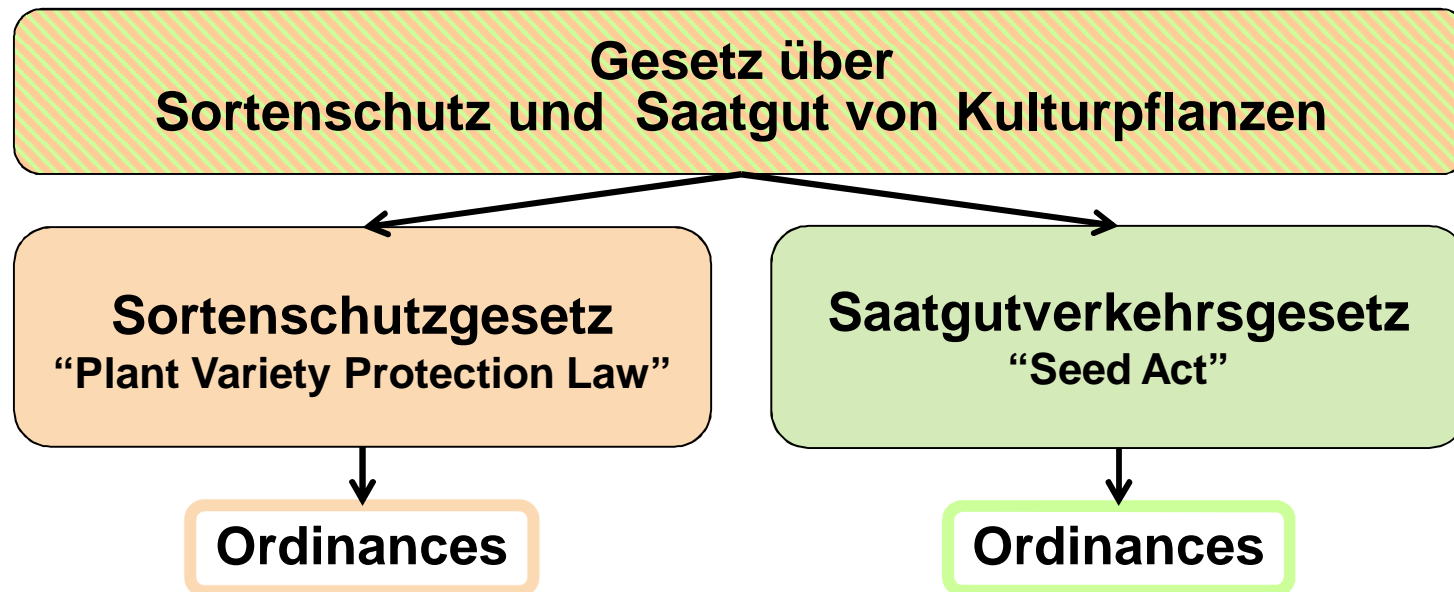


# German Plant Variety and Seed Legislation

1968

∅ comprehensive amendments based on international regulations

∅ one law becomes two laws





# German Plant Variety and Seed Legislation

1985

- New version of the **Plant Variety Protection Law**
  - Adaptation to the revision of the UPOV Convention (1978)
  - Streamlining and improved structure
  
- New version of **Seed Act**
  - Adaptation to revised EEC Directives on the marketing of seed
  - Seed production becomes more international
    - More detailed rules for seed imports
    - Rules for harmonization of field inspection and seed certification in third countries
    - Rules for monitoring imports
    - Publication of varieties listed in other EEC countries



# German Plant Variety and Seed Legislation

1994

∅ National Plant Variety Protection law amended

- Ratification of the UPOV Convention (1991)
- Implementation of the EC Regulation on Community Plant Variety Rights

Today



# Germany 2022 – Facts and Figures

	2021	Mio. ha	Mio. t	dt/ha
<b><u>Agricultural area</u></b>		<b>16,6</b>		
thereof arable land		11,7		
pasture		4,5		
<b><u>Plant species cultivated</u></b>				
Wheat		2,94	21,46	
- thereof Winter wheat		2,87	21,09	73,0
Maize		2,65		
- thereof silage			4,46	472,3
- thereof corn			104,84	103,6
Barley		1,54	10,41	
- thereof Winter barley		1,24	8,89	71,6
Rapeseed		1,01	3,51	35,1
Rye		0,63	3,33	52,7
Sugar beet		0,39	31,95	817,7
Potatoes		0,26	11,31	437,9
Oat		0,18	0,77	43,2



<https://www.bmel-statistik.de/archiv/statistisches-jahrbuch>



# PLANT BREEDING SECTOR in Germany





# Plant Breeding Research

- **Plant Breeding Research**

takes place at

- different universities
- **Julius Kühn-Institut** – Federal Research Centre for Cultivated Plants
- supported by **Society for Plant Breeding e.V.**
  - established and financed by  
private plant breeding companies and  
supported by the government





# Plant Breeding Sector

- **German Plant Breeders' Association (BDP)**
  - majority (ca. 130) of German breeding and seed companies
  - around 5,800 employees
  - 58 companies with own breeding programmes
  - 3,100 ha area for breeding purposes
  - High share of research and development (R&D): 16,3 %
  - 115 plant species are bred in Germany



**5** Breeding companies  
Fodder crops



**5** Breeding companies  
Sugar beet



**7** Breeding companies  
Vegetables



**7** Breeding companies  
Ornamentals



**10** Breeding companies  
Potatoes



**11** Breeding companies  
Maize



**22** Breeding companies  
Oil and protein crops



**28** Breeding companies  
Cereals

<https://www.bdp-online.de/de/Branche/Kennzahlen/>

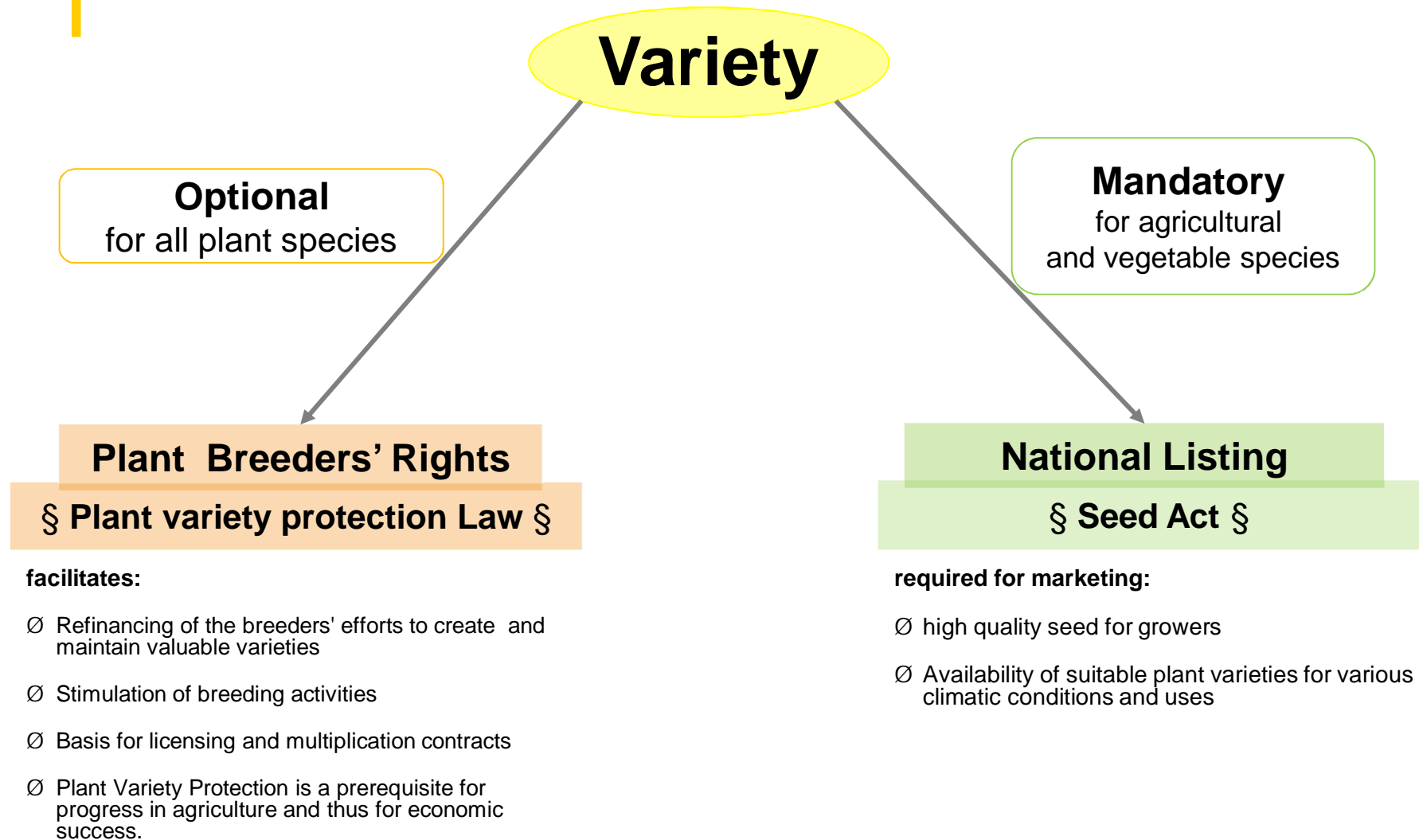


# Plant Breeding Sector

- **Breeding of varieties**
  - 10 to 15 years from first cross until finalized new variety
  - costs: 1 - 2 Million EURO
- **Plant breeders focus on**
  - Ø yield improvement: ca. 1,5 % per year
    - Genetic influence: 50 – 75 %, trend increasing
  - + quality, e.g.
    - Baking quality in cereals, processing quality of potatoes
    - Food quality, shelf life of vegetables and fruits
  - + resistances
  - + agronomical features (e.g. winter hardiness, lodging, ...)



# Plant Breeding Sector





# GERMAN VARIETY AND SEED LEGISLATION



- **Plant Breeders' Rights Act** ([SortSchG](#))
- **Seed Act** ([SaatG](#))
- **Species List in the Seed Act Ordinance** ([SaatArtVerzV](#))
- **Operations Ordinance for the Federal Plant Variety Office** ([BSAVfV](#))
- **Seed Regulation on agricultural species and vegetable species** ([SaatV](#))
- **Seed Potato Ordinance** ([PflKartV](#))
- **Vegetative Propagation Material Ordinance for Vines** ([RebPflV](#))
- **Conservation varieties ordinance relating to the certification of conservation varieties and marketing of conservation varieties of seed and plant material** ([Erhaltungsv](#))
- **Conservation Seed Mixtures Ordinance** ([ErMiV](#))
- **Seed Records Ordinance** ([SaatAufzV](#))
- **German Planting Material Ordinance** ([AGOZV](#))



# Sortenschutzgesetz “Plant Variety Protection Law”

🌀 to secure intellectual property rights for new plant varieties <sup>i</sup>

∅ national German law embedded in EU regulations and based on UPOV Convention 1991

∅ Criteria for examination and granting

§ Novelty

§ Distinctness

§ Uniformity

§ Stability

§ Variety denomination

∅ Duration of protection:

§ 25 years

§ 30 years for potato, hop, vine, tree species

🌀 Responsibility: **Federal Plant Variety Office**



# Sortenschutzgesetz “Plant Variety Protection Law”

- Varieties of all plant species can be protected
- **The holder/owner is entitled to**
  - a) Multiplication
  - b) Conditioning for the purpose of propagation
  - c) Offering for sale
  - d) Selling or marketing
  - e) Importing and exporting
  - f) Stocking for a)-e)**of material of the protected variety**
- Plant Breeders’ Rights cover
  - Protected variety
  - Essentially derived variety
  - Varieties whose production requires the continuous use of the protected variety





# Saatgutverkehrsgesetz “Seed Act”

🔄 Variety listing to ensure that growers have suitable plant varieties **i** available for their climatic conditions and uses

∅ Criteria for granting

§ **D**istinctness,

§ **U**niformity

§ **S**tability

§ Variety Denomination

for agricultural species:

∅ Testing for **V**alue for **C**ultivation and **U**se (**VCU**)

ü Yield

ü Quality

ü Resistances to pests and diseases

ü Agronomic characteristics

🔄 Responsibility: **Federal Plant Variety Office**



# Saatgutverkehrsgesetz “Seed Act”

- 🔄 **Seed certification** to ensure high quality seed for growers **i**
  - ∅ Only certified seed of listed varieties may be marketed
  - ∅ Seed must meet specified requirements
    - Field inspection: varietal purity, minimum distances, health
    - Seed testing: purity, germination capacity, contamination with other species
  - ∅ Specifications for packaging, sealing, labelling

🔄 Responsibility: **Certification agencies** of the Federal States



# Saatgutverkehrsgesetz “Seed Act”

## 🌱 **Market control** to ensure high quality seed for growers 🌱

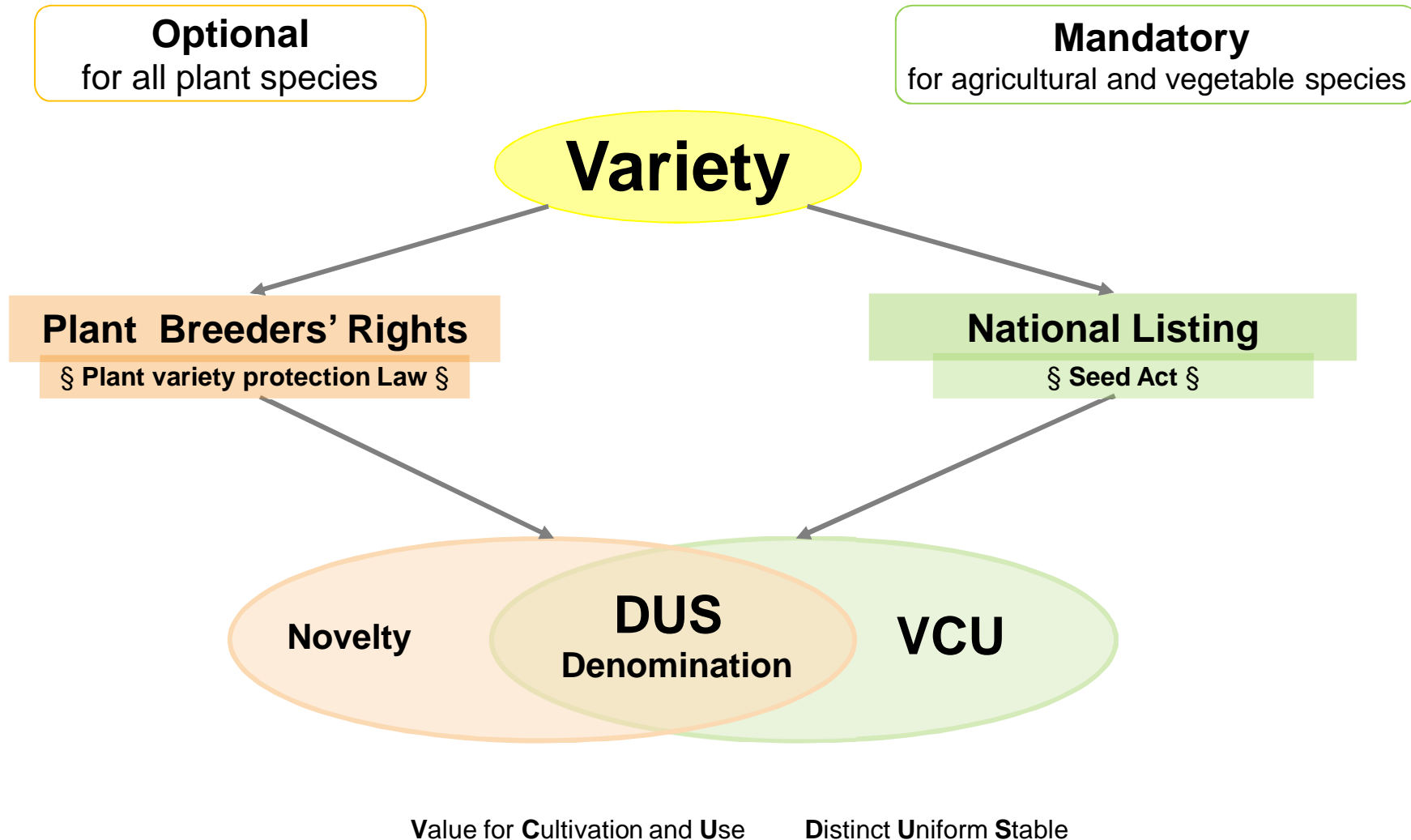
- Seed on the market is tested on a risk based approach (seed testing and post control test)
- Packaging, sealing, labelling
- Companies marketing seeds and other plant reproductive material are controlled (record keeping, labelling, storage)

🌱 Responsibility: **Market control agencies** of the Federal States



# Federal Plant Variety Office

## Criteria of variety testing





# BUNDESSORTENAMT

*Federal Plant Variety Office*



Independent Federal authority under the jurisdiction of the  
Federal Ministry of Food and Agriculture (BMEL)



# Federal Plant Variety Office

## Organisational structure

- Headquarters: Hannover
- 7 testing stations

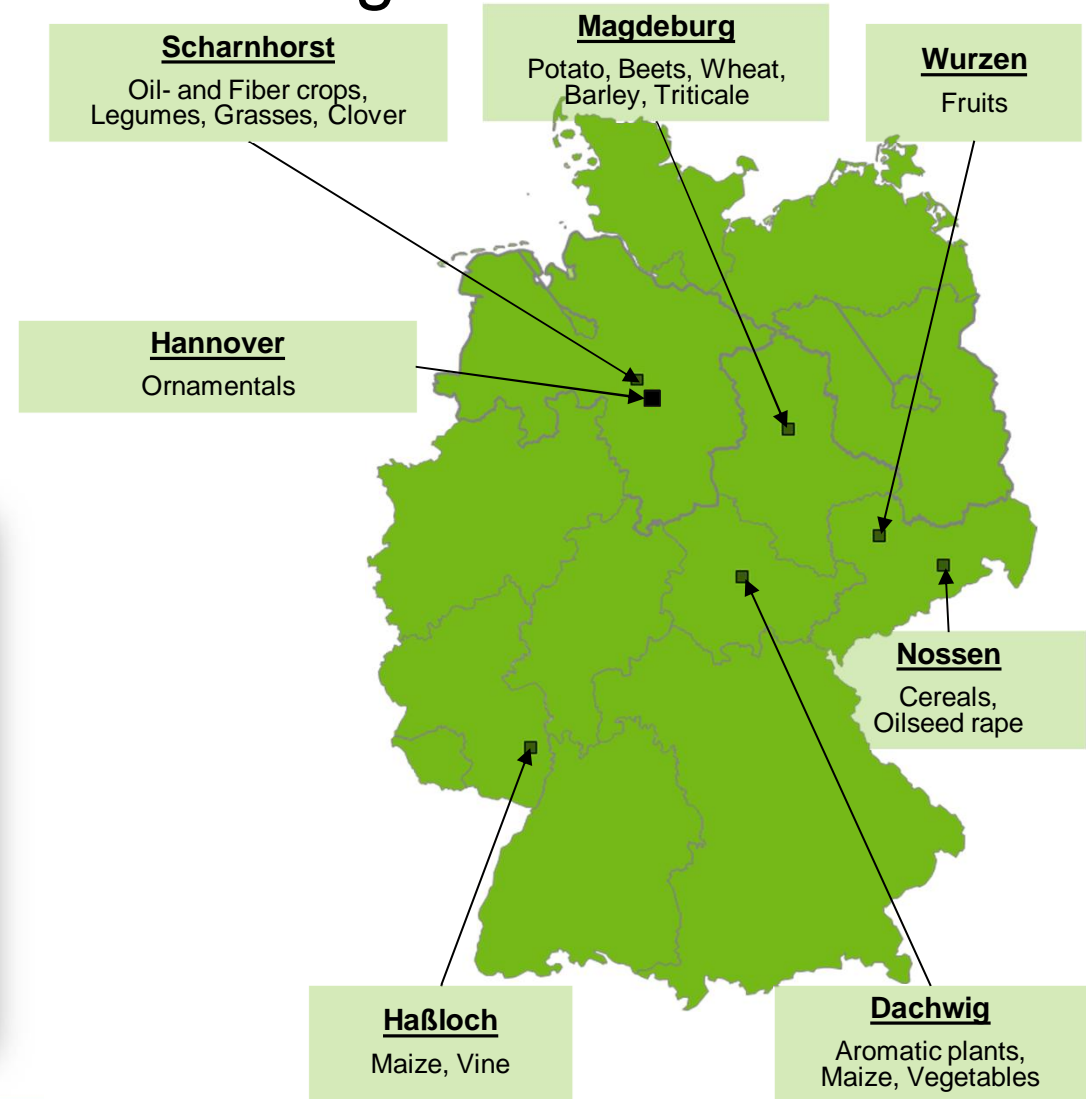






# Federal Plant Variety Office Organisational structure

- Headquarters: Hannover
- 7 testing stations
- ~ 300 employees
- Gazette:





# Federal Plant Variety Office

## Financial year 2021

Income	14,2 Mio. €
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Expenditures	24,4 Mio. €
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Salaries	14,6 Mio. €
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Administrative/operational expenditures	8,3 Mio. €
---	------------

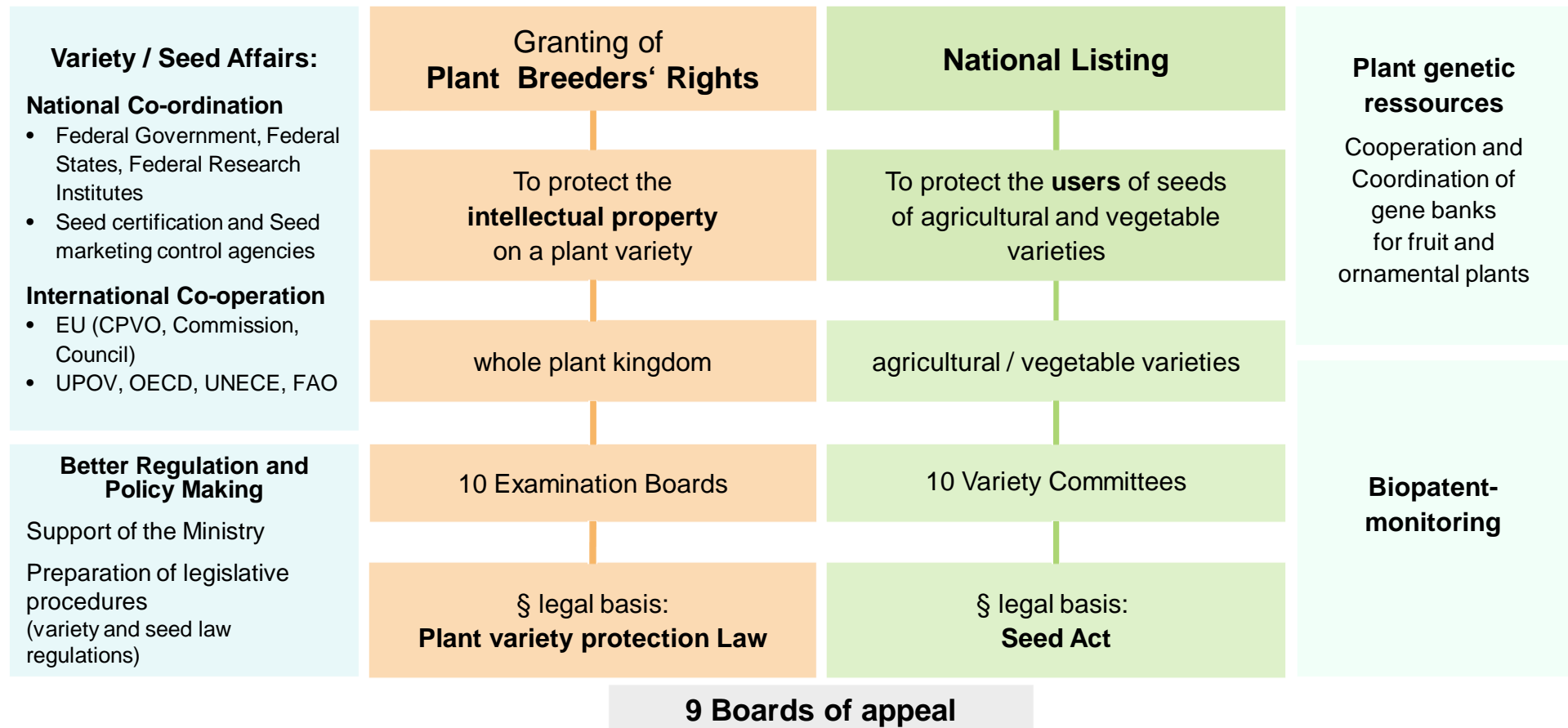
Investments	1,5 Mio. €
-------------	------------

Cost coverage rate <small>(fee related activities)</small>	77 %
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# Federal Plant Variety Office

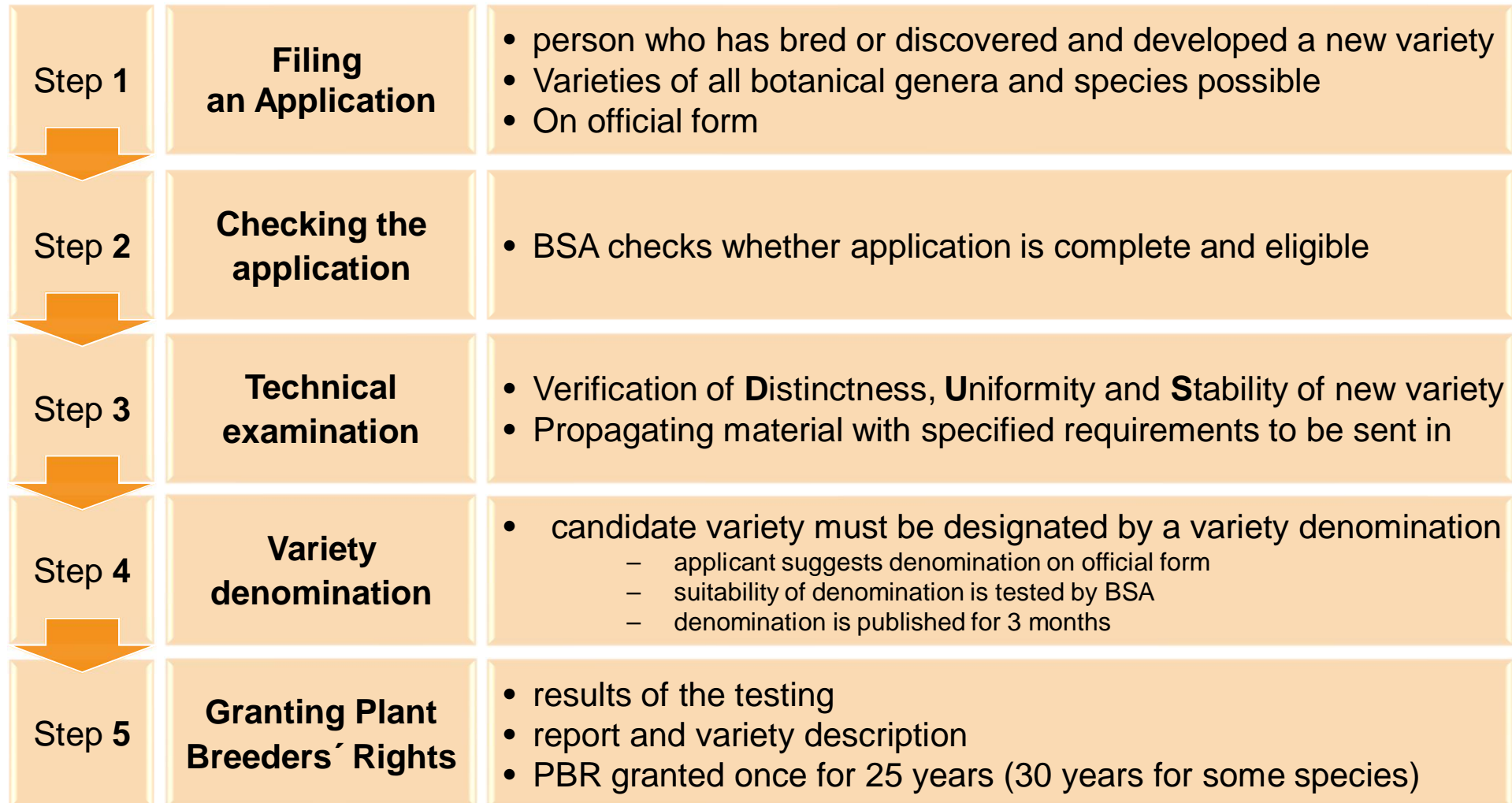
## Tasks and responsibilities





# Federal Plant Variety Office

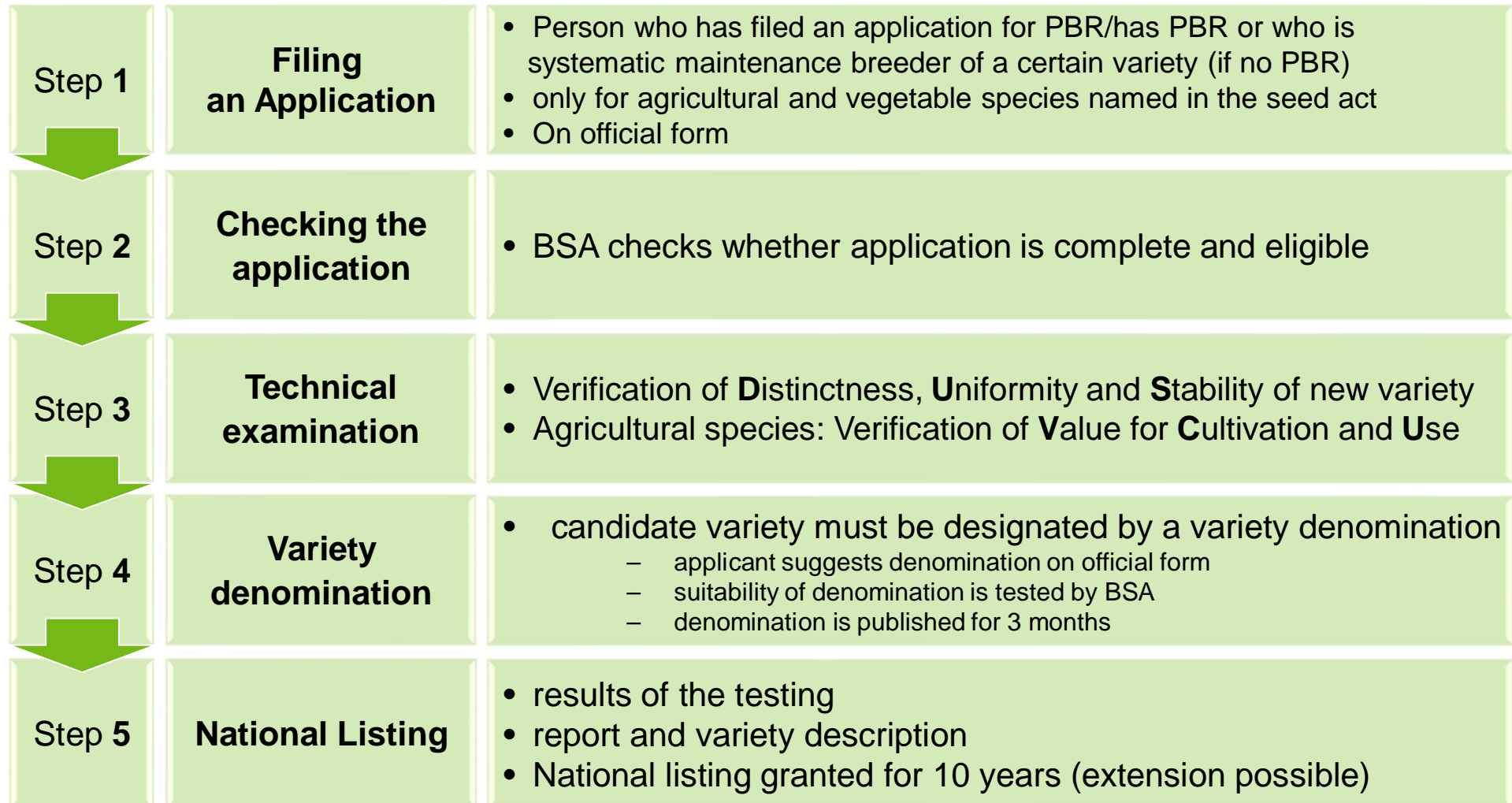
## Procedure - Plant Breeders' Rights





# Federal Plant Variety Office

## Procedure - National Listing





# Federal Plant Variety Office

## DUS testing

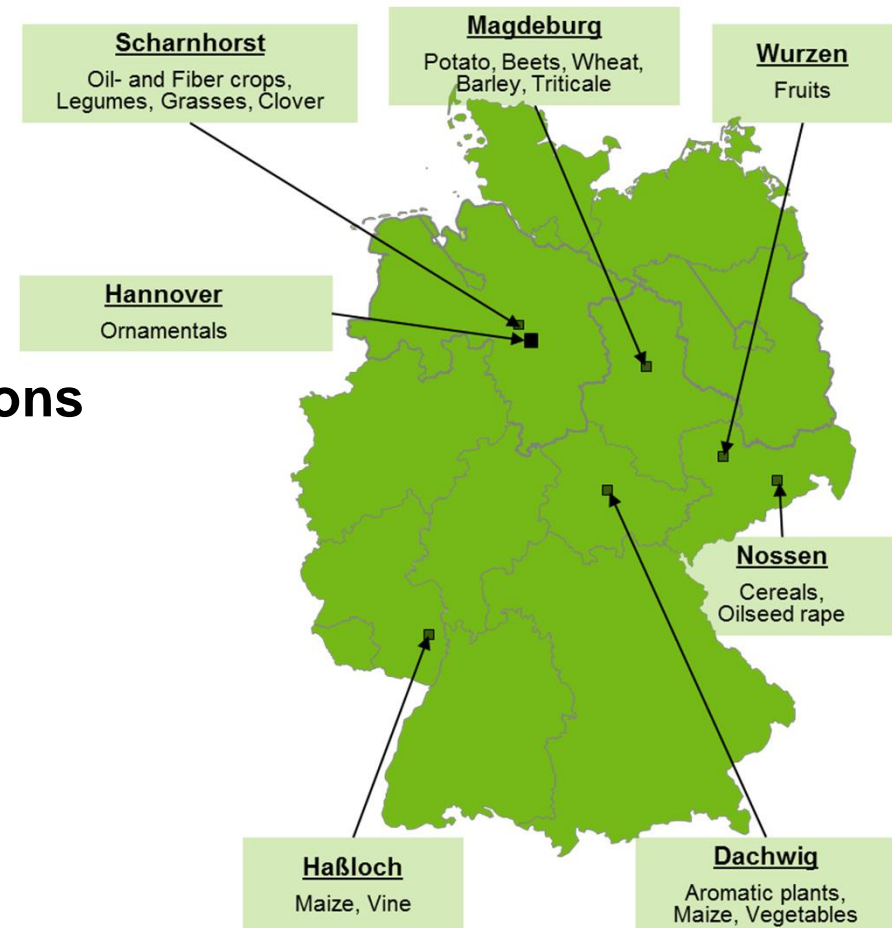
### ∅ DUS Testing sites

- usually one BSA testing station
- DUS test in other countries via bilateral co-operation

### ∅ Verification via technical examinations

- **DUS** testing

- Regular testing period
  - » cereals
  - » ornamentals
- |         |
|---------|
| 2 years |
| 3 years |
| 1 year  |



**DUS** = Distinct, Uniform, Stable



# Federal Plant Variety Office

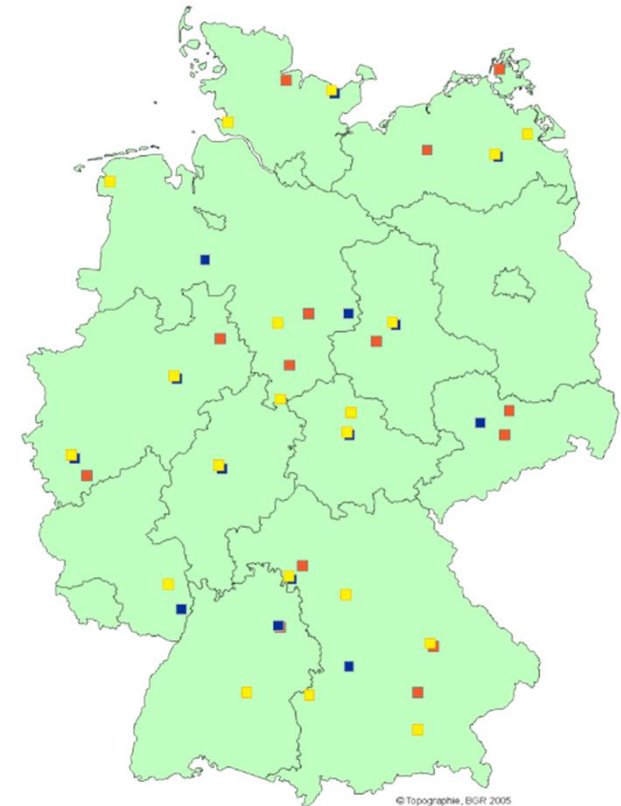
## VCU testing

### ∅ VCU Testing sites

- 1st year:  
Bundessortenamt + Breeding Companies
- 2nd and 3rd year:  
Bundessortenamt + Federal States



Descriptive Variety Lists



### Winter Wheat 2020

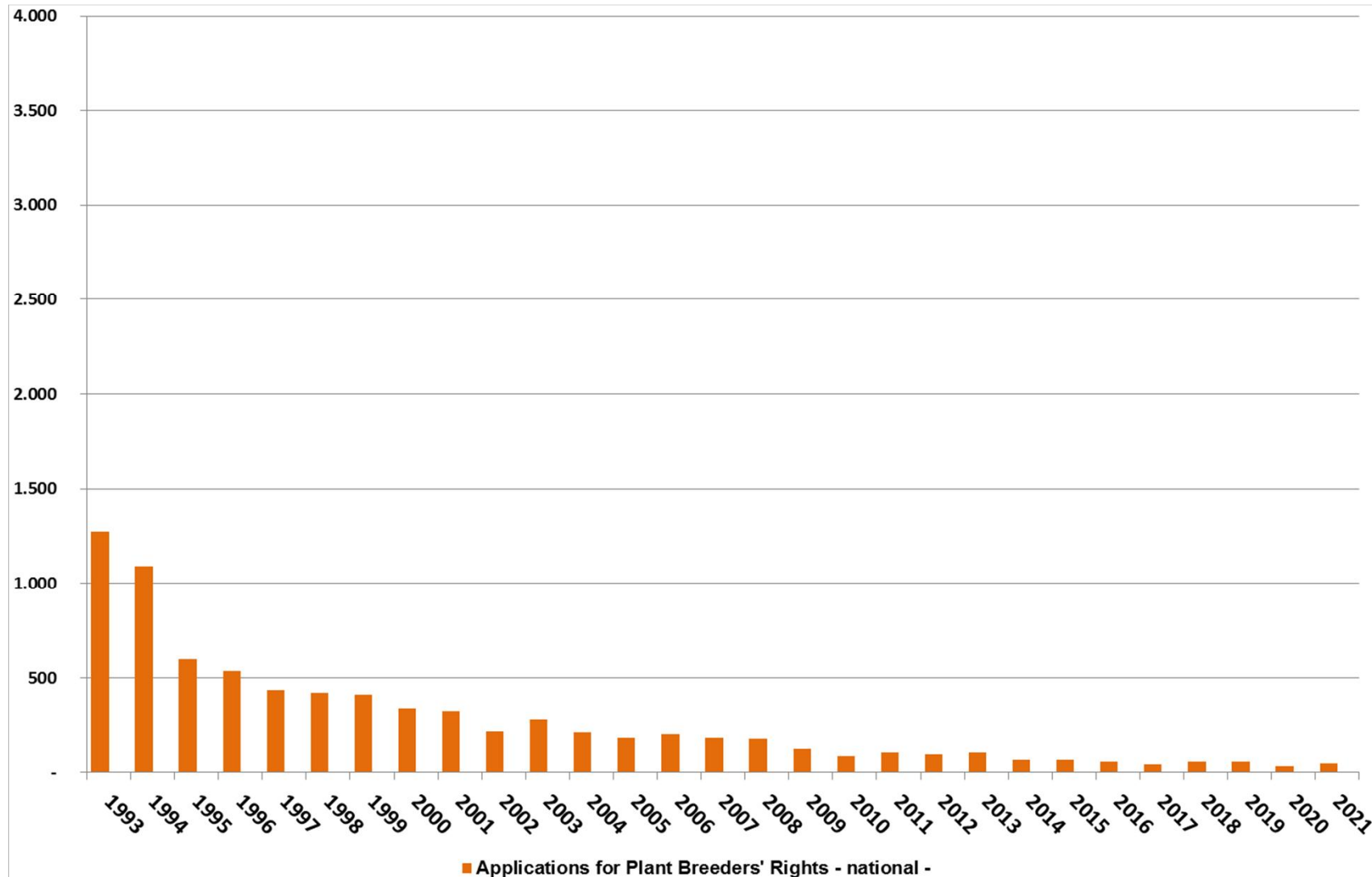
■ 1 <sup>st</sup> year	14 locations
■ 2 <sup>nd</sup> year	14 locations
■ 3 <sup>rd</sup> year	20 locations
<b>Total</b>	<b>38 different locations</b>





# Federal Plant Variety Office

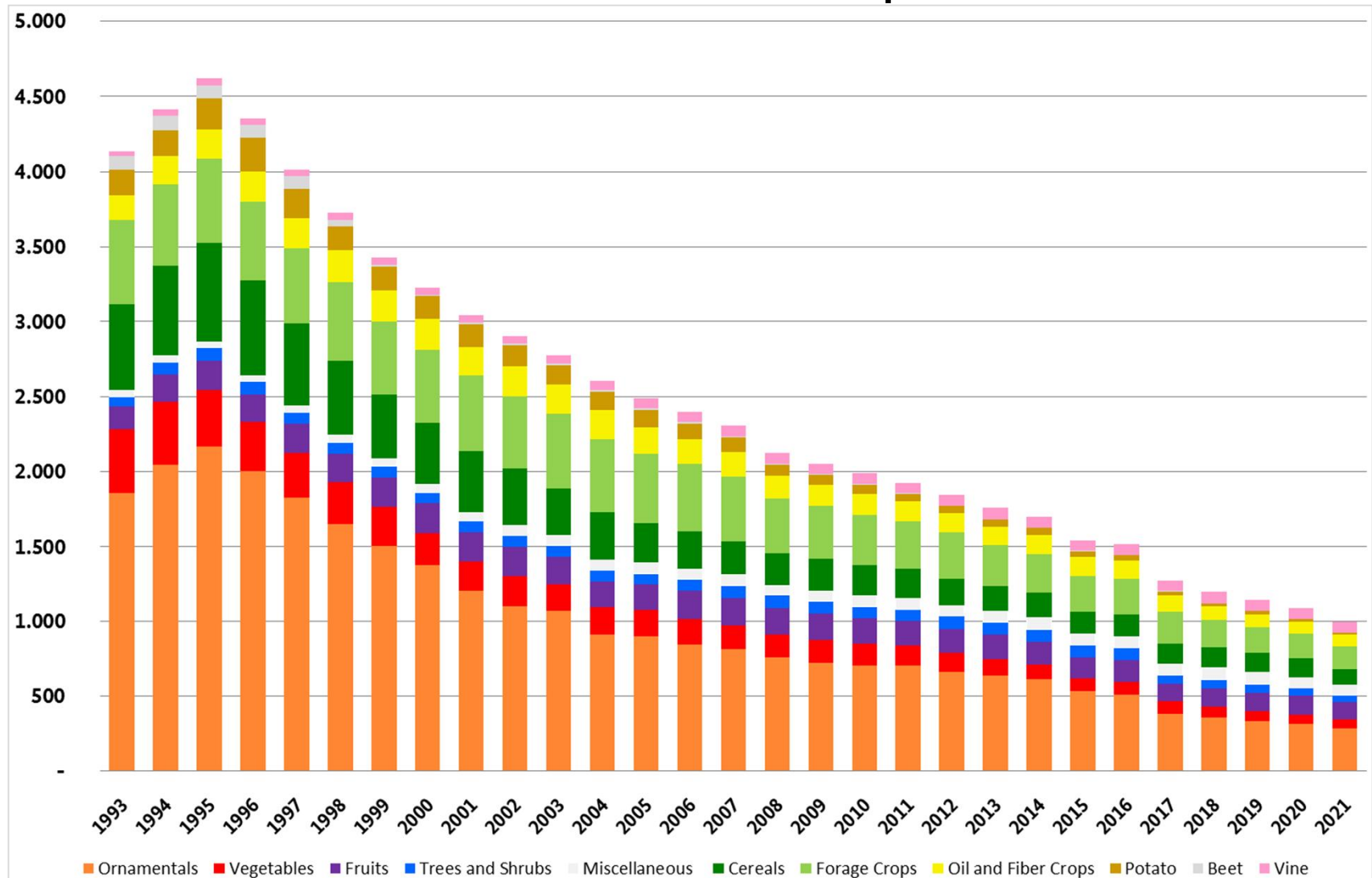
## PBR - Number of applications





# Federal Plant Variety Office

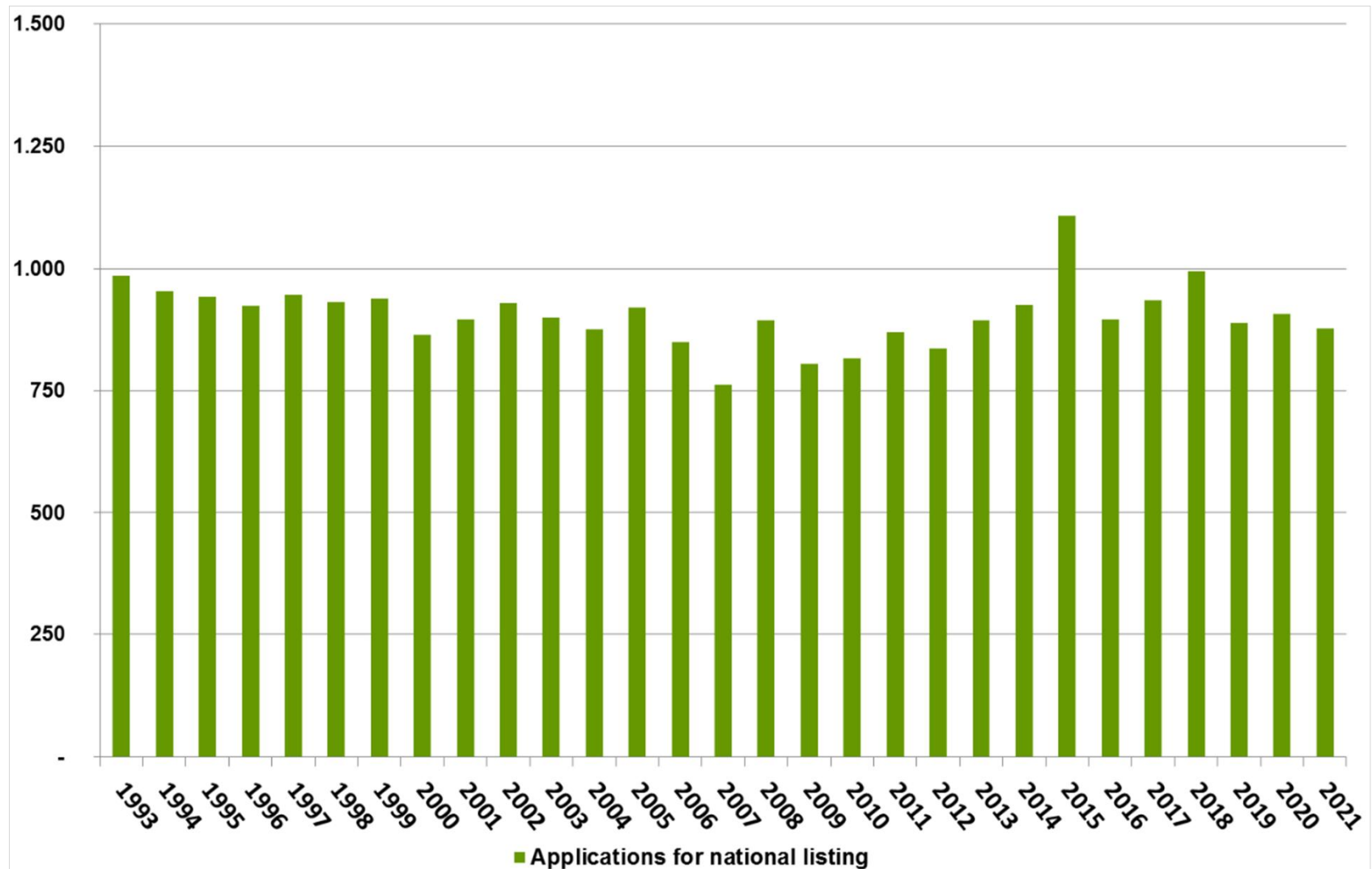
## PBR - Number of protected varieties





# Federal Plant Variety Office

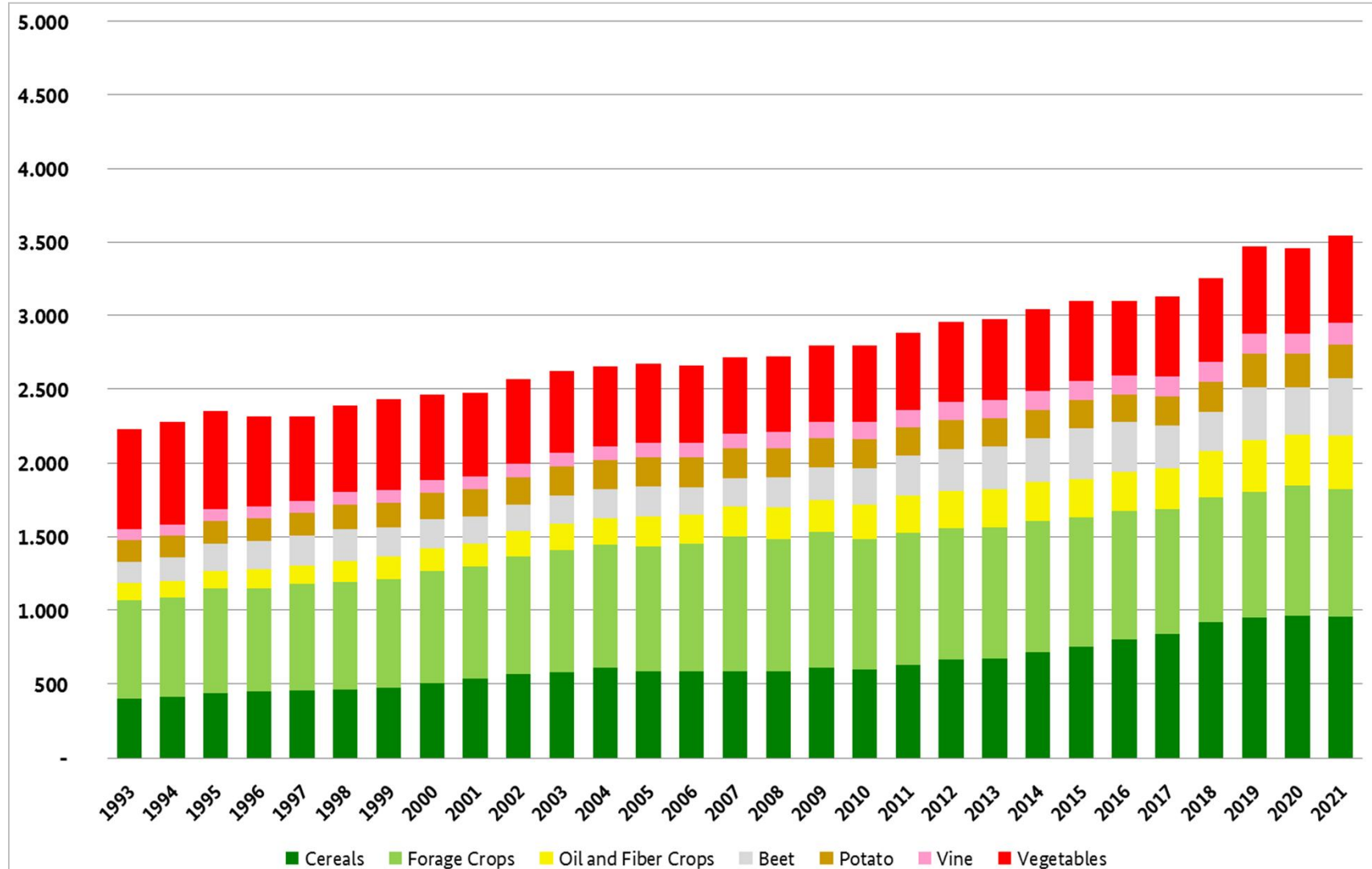
## National Listing - Number of applications





# Federal Plant Variety Office

## National Listing - Number of listed varieties





# FEDERAL STATES



<https://tillr.thueringen.de>



# Federal States

## Tasks and Responsibilities

- ∅ Advisory service for farmers
  - § Regional variety tests of listed varieties
  - § recommendation of varieties
  
- ∅ Seed Certification
  - § Mandatory for agricultural species
  - § Voluntary for vegetable species
  
- ∅ Seed Market Control





# Federal States

## Seed certification process

### 1. Registration of multiplication

- Applicant has to make a request at the seed certification agency at legally prescribed registration dates
  - plant species
  - variety
  - grower/farmer/companies
  - name and size of the field of seed multiplication
  - parent seeds
  - etc.
- Certification agency controls these information





# Federal States

## Seed certification process

### 2. Field inspection

- Certification agency appoints an auditor to inspect the field of the multiplication (once or more often)
  - different plant species
  - identity of variety
  - off-types
  - weeds
  - plant health
  - minimum distances to other fields



<https://www.landwirtschaftskammer.de>



# Federal States

## Seed certification process

### 3. Seed sampling

- Authorised person takes representative samples of each seed lot
  - Maximum weight of a seed lot *of e. g. wheat* 30 tons
  - Minimum weight of a sample *of e. g. wheat* 1,0 kilogram
- Officially sealed sample is sent to an authorised laboratory

### 4. Seed (or tuber) testing

- Authorised laboratory examines samples using standardized methods to determine
  - purity
  - germination
  - and other parameters depending on the plant species



# Federal States Authority

## Seed certification process

### 5. Certification of the seed lot

- If all parameters meet the minimum standards the seed lot is getting certified by the seed certification agency
- ∅ From this moment on labelling and marketing is allowed
  - ∅ The distributor is responsible for ensuring that the minimum legal requirements are met when selling
  - ∅ Authorities for seed market controls make random checks in trading companies (*labelling, quality standards, ...*)



# Federal Plant Variety Office

## Coordination with Federal State Authorities

**Federal  
Plant  
Variety  
Office**

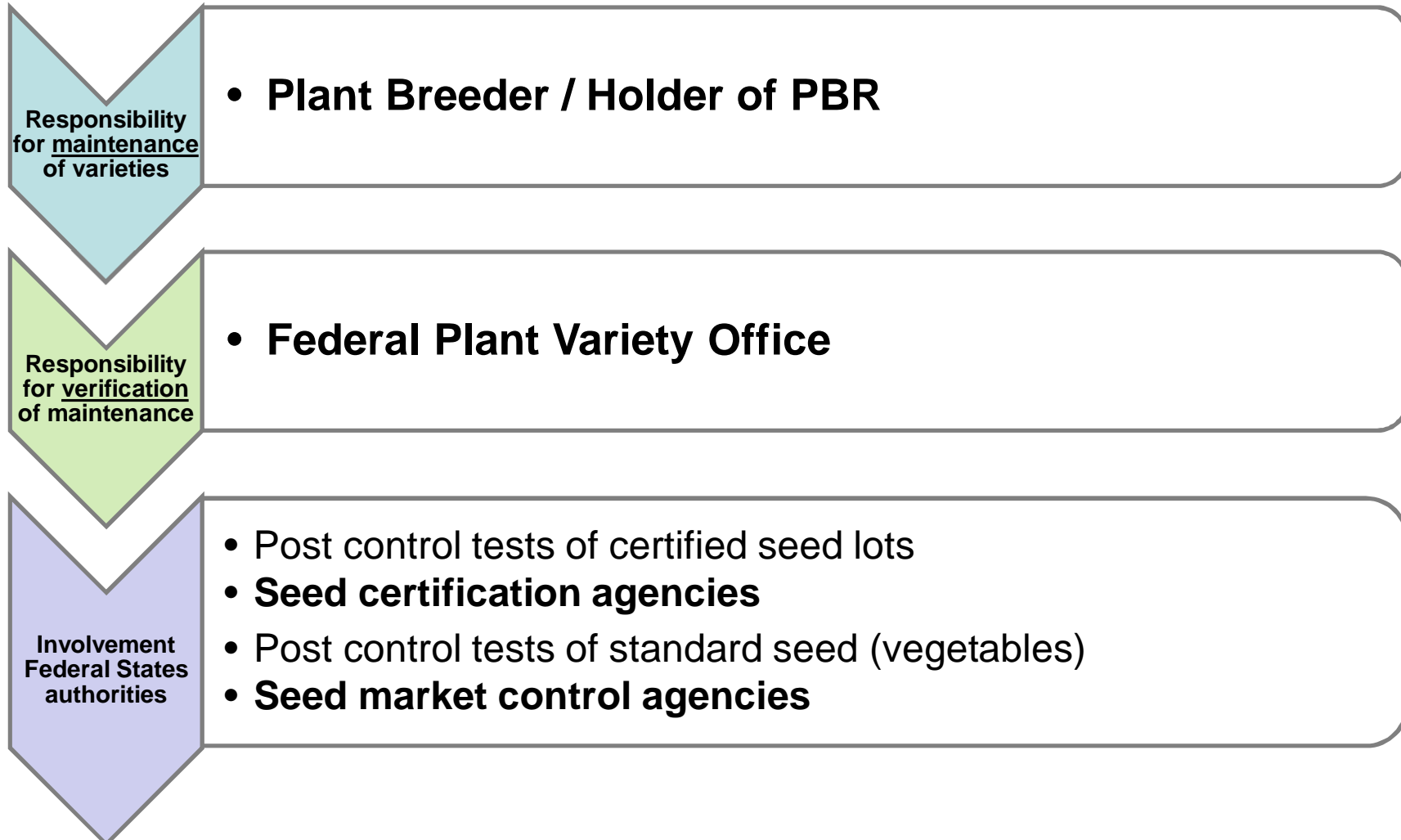
- Data exchange
- VCU trials
- Post Control Plots
- International Requests
- Better Regulation and Policy Making

**Federal  
State  
Authorities**



# Variety maintenance

## Post Control





# VARIETY AND SEED LEGISLATION EUROPEAN UNION



Richtlinien des Rates	
1	Richtlinie 66/401/EWG des Rates vom 14. Juni 1966 über den Verkehr mit Futterpflanzensaatgut 11
2	Richtlinie 66/402/EWG des Rates vom 14. Juni 1966 über den Verkehr mit Getreidesaatgut 57
3	Richtlinie 68/193/EWG des Rates vom 9. April 1968 über den Verkehr mit vegetativem Vermehrungsgut von Reben 91
4	Richtlinie 2002/53/EG des Rates vom 13. Juni 2002 über einen gemeinsamen Sortenkatalog für landwirtschaftliche Pflanzenarten 115
5	Richtlinie 2002/54/EG des Rates vom 13. Juni 2002 über den Verkehr mit Betarübensaatgut 133
6	Richtlinie 2002/55/EG des Rates vom 13. Juni 2002 über den Verkehr mit Gemüsesaatgut 163
7	Richtlinie 2002/56/EG des Rates vom 13. Juni 2002 über den Verkehr mit Pflanzkartoffeln 209
8	Richtlinie 2002/57/EG des Rates vom 13. Juni 2002 über den Verkehr mit Saatgut von Öl- und Faserpflanzen 233
9	Richtlinie 2008/72/EG des Rates vom 15. Juli 2008 über das Inverkehrbringen von Gemüsepflanzgut und Gemüsevermehrungsmaterial mit Ausnahme von Saatgut 275
10	Richtlinie 2008/90/EG des Rates vom 29. September 2008 über das Inverkehrbringen von Vermehrungsmaterial und Pflanzen von Obstarten zur Fruchterzeugung 293



# Plant Breeders' Rights System



## ∅ Community Plant Variety Rights (EU)

### ○ main objectives

- 1 application
- 1 testing procedure
- 1 report and variety description
- 1 granting of PBR
- title valid throughout the EU

### ○ § legal basis

- Council Regulation (EC) No 2100/94
- Developed on basis of national European systems and UPOV Convention of 1991

### ○ Exists parallel to national PBR systems

### ○ Duration

∅ granted for 25 years

∅ asparagus, hop, potatoes, vine, flower bulbs, woody small fruits, woody ornamentals and trees for 30 years



(12 MS in 1994, 27 MS today)





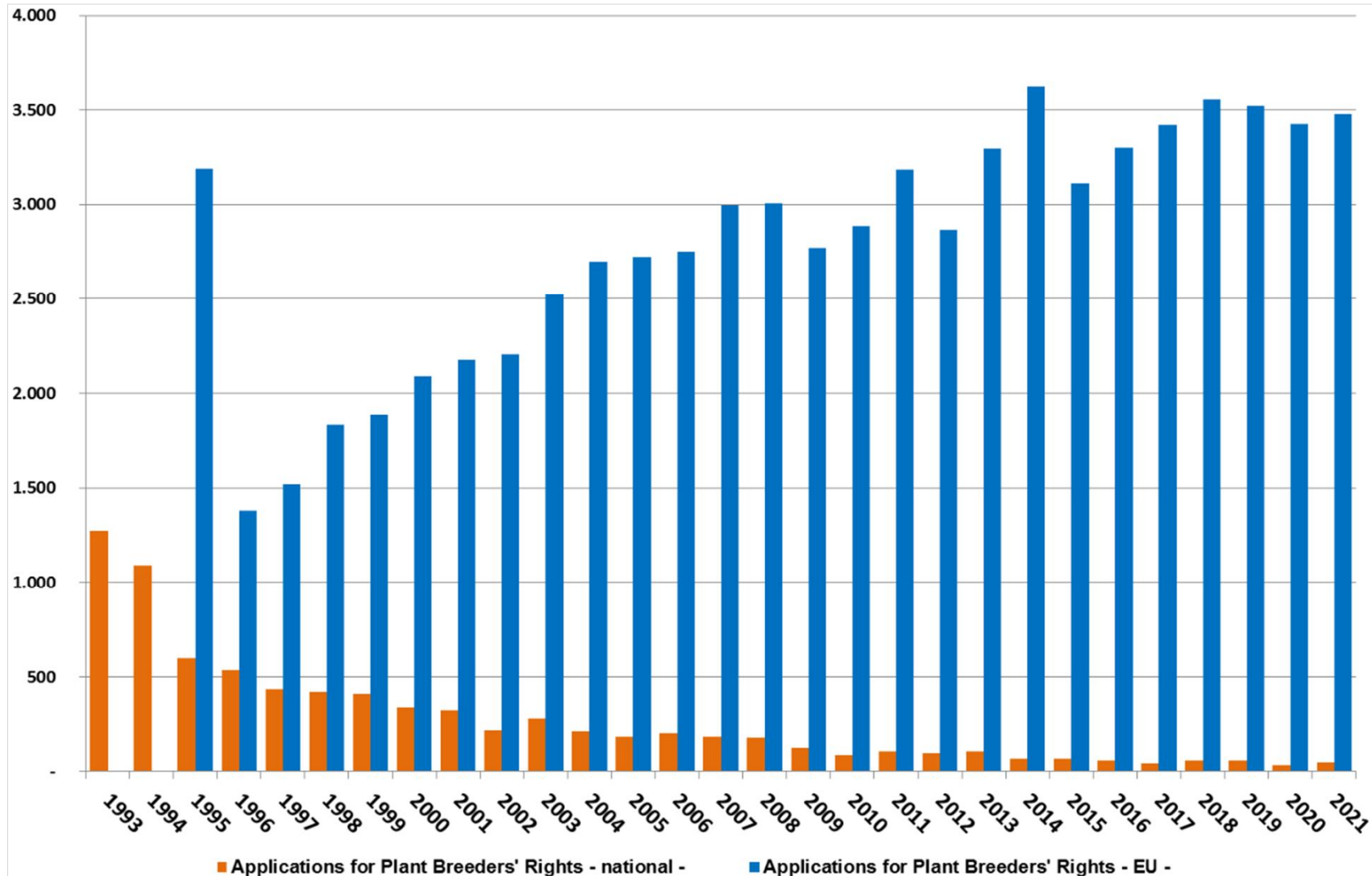
## ∅ Community Plant Variety Office (CPVO)

- established in 1995 in Angers, France
- no testing stations of CPVO
- DUS tests carried out at testing sites of national variety offices, entrusted by CPVO
- national Offices audited by CPVO





# Plant Breeders' Rights Number of applications





# Marketing of varieties of agricultural and vegetables species in the EU

- Regulated in marketing directives
- Varieties need to be **nationally listed** in at least one Member state
- Member states notify listed varieties for the Common Catalogues
- ∅ Varieties are marketable throughout the EU

European Commission

EN English

Food Safety

Home Food Animals Plants Horizontal topics

Home > Plants > Plant reproductive material > Plant variety catalogues, databases & information systems

## Plant variety catalogues, databases & information systems

PAGE CONTENTS

- [Agricultural and vegetable species](#)
- [Forest tree species](#)
- [Fruit genera and species](#)
- [Vine propagating material of the genus Vitis](#)

### Agricultural and vegetable species

[EU database of registered plant varieties](#)

The common catalogues of varieties of agricultural plant and vegetable species list the varieties which can be marketed in the EU.

Catalogues are based on the registration of plant varieties in EU countries after they have been technically examined there and notified to the Commission. Consolidated versions of both catalogues can be found below.

- [Common catalogue of varieties of agricultural plant species](#) <sup>EN</sup> <sup>\*\*\*</sup> – version of 13 December 2021
- [Common catalogue of varieties of vegetable species](#) <sup>EN</sup> <sup>\*\*\*</sup> – version of 13 December 2021
- [Privacy statement](#) <sup>EN</sup> <sup>\*\*\*</sup>

The updates are published in the Official Journal.

[https://food.ec.europa.eu/plants/plant-reproductive-material/plant-variety-catalogues-databases-information-systems\\_en](https://food.ec.europa.eu/plants/plant-reproductive-material/plant-variety-catalogues-databases-information-systems_en)



# European Union

## Number of protected and listed varieties

**30,484 Protected varieties**

(as of December 2022)

**22,261 Listed vegetable varieties**

(as of June 2022)

**25,388 Listed agricultural varieties**

(as of October 2022)





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