

**UNECE STANDARD S-1**  
**Certification and commercial quality**  
**Control of**  
**SEED POTATOES**



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- **PURPOSE**
- **CONTENT**
- **PRATICAL USES**

# PURPOSE OF THE UNECE STANDARD

## The UNECE standard is the

- **Unique international frame of reference to seed potatoes certification**
- **Only one where all aspects of seed potato marketing are addressed :**
  - ✓ **varietal, sanitary, genealogical,**
  - ✓ **classification into categories (prebasic, basic, certified),**
  - ✓ **technological standards (grading, packaging, labelling).**
- **Only a recommendation**

## **PURPOSE OF THE UNECE STANDARD**

**The UNECE standard allowed on basis of its recommendations especially :**

- The development of national rules**
- The EU marketing directive**
- The equivalence between countries**

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## **THE CONTENT OF THE UNECE STANDARD**

**The content of the UNECE STANDARD covers all the aspect of seed-potato certification. It is a principal difference with the other regulation like : IPPC, EPPO, etc.**

# THE CONTENT OF THE UNECE STANDARD

**The UNECE contents all the conditions to respect :**

- **Varietal identity and purity**
- **Genealogy and traceability**
- **Diseases and pests**
- **External quality and physiology**
- **Sizing and labelling.**

# THE CONTENT OF THE UNECE STANDARD

**The respect of these conditions are based on :**

**Genealogy scheme**

**Field inspection**

**Lot inspection**

**Post harvest control**

**Laboratory testing**

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## **GENEALOGY CLASSIFICATION**

- **Classification**

- **Pre-basic Category Seed**
- **Basic Category Seed**
- **Certified Category Seed**
- **Fields generation**

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**Classification :**

• ***Pre-basic Category Seed :***

a) pre-basic TC class seed shall be directly derived by micropropagation and may be issue culture plantlets or tubers of the first generation meeting the requirements specified in Annex,

b) pre-basic class seed shall be generations of seed multiplied in the field prior to basic seed, meeting the requirements specified in Annex.



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- ***Basic Category Seed :***

These are seed potatoes descended directly from Pre-basic or Basic category seed or produced under special provisions of a national certification scheme and are mainly intended for the production of certified seed potatoes.

Seed shall be classified as either Basic I or Basic II according to the minimum requirements given in Annex.

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- ***Certified Category Seed :***

**These are seed potatoes descended directly from Pre-basic, Basic or Certified category seed and are mainly intended for the production of potatoes other than seed potatoes.**

**Seed shall be classified Certified I or Certified II according to the minimum requirements given in Annex.**

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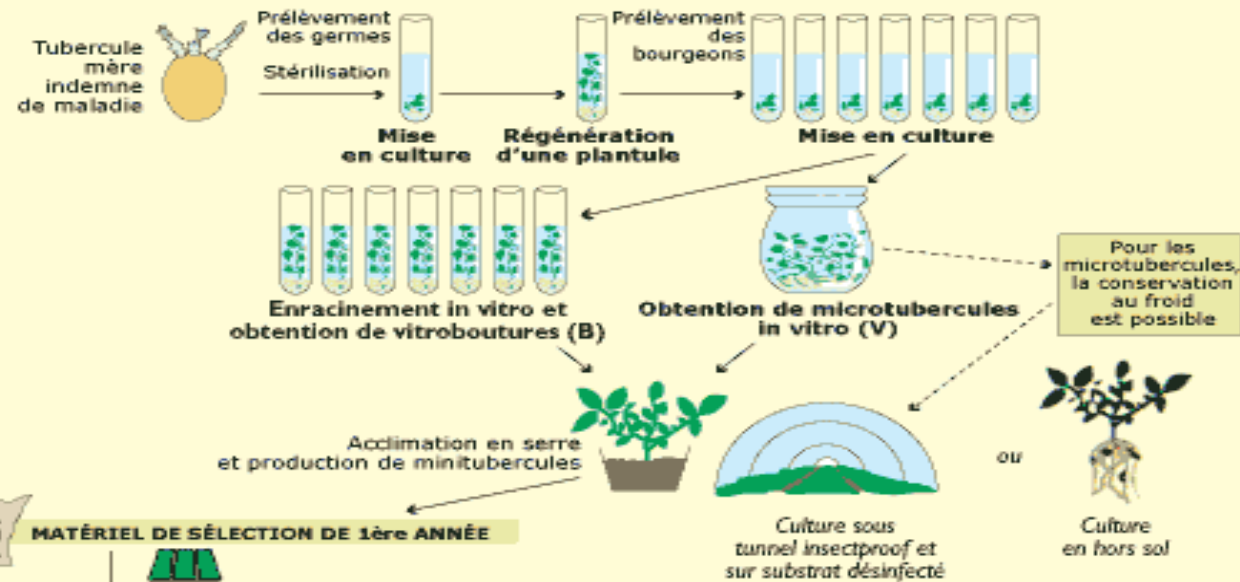
**Classification :**

- ***Field generation :***

**Each class may additionally be classified according to the number of generations (FG1, FG2, etc...).**

# Genealogy scheme of the french seed potatoes

## MATÉRIEL DE SÉLECTION

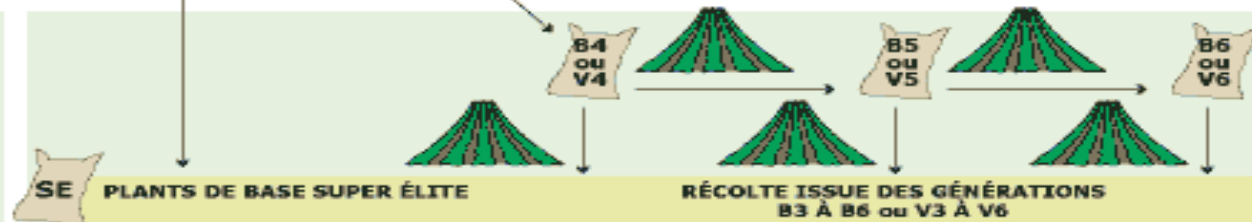


**B1 ou V1** MATÉRIEL DE SÉLECTION DE 1ère ANNÉE

**B2 ou V2** MATÉRIEL DE SÉLECTION DE 2ème ANNÉE

**B3 ou V3** MATÉRIEL DE SÉLECTION DE 3ème ANNÉE

## PLANTS DE BASE



## PLANTS CERTIFIÉS

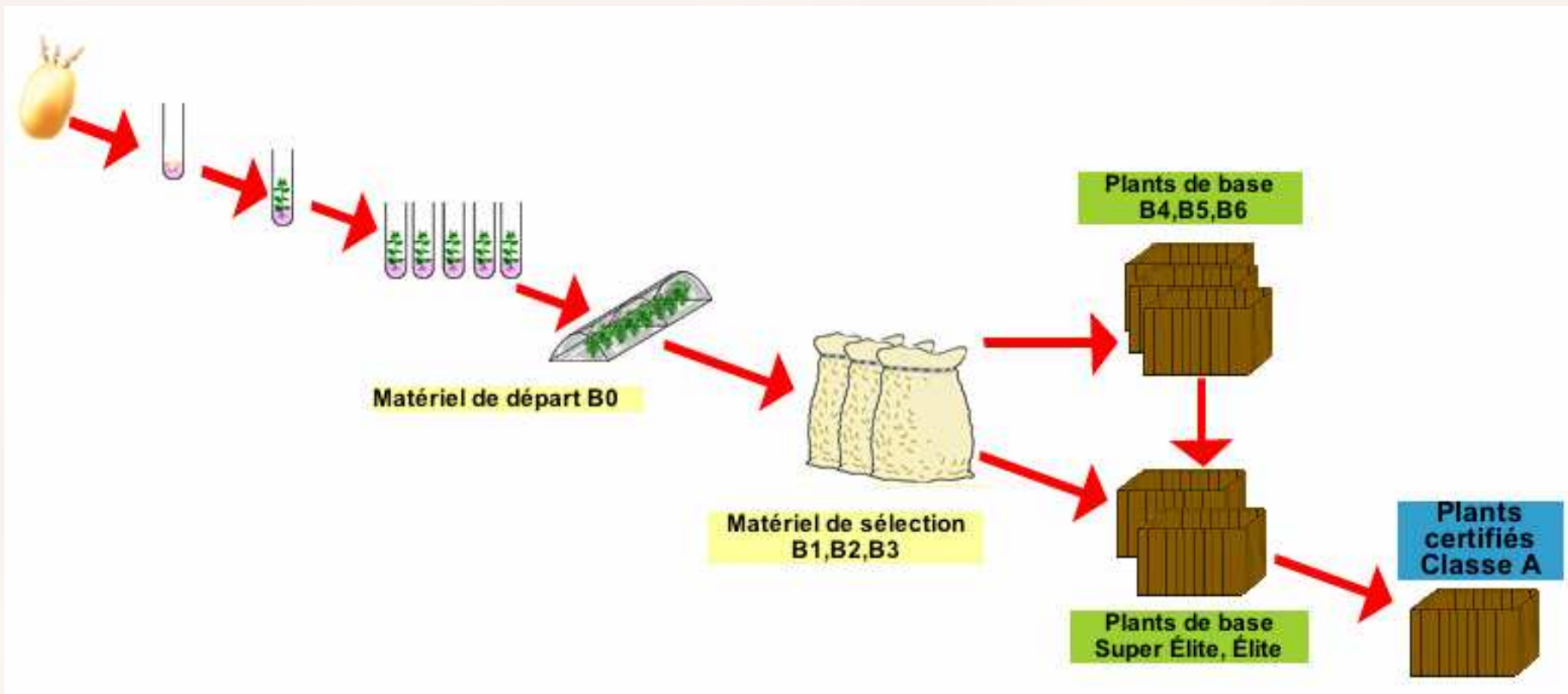


# THE CONTENT OF THE UNECE STANDARD

**Genealogy scheme :**

**The registration of the data allows the traceability**

# GENEALOGICAL SCHEME OF PRODUCTION



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**VARIETAL IDENTITY AND PURITY**

The variety should be distinct, uniform and stable according to the guidelines of UPOV and have a denomination allowing its identification.

**DEFINITION OF PRODUCE**

Seed potatoes are tubers or any other propagation material, other than true seed, of *Solanum tuberosum* L.

**PROVISIONS CONCERNING THE VARIETY**

Varieties shall be accepted into the Standard only if an official description and a reference sample are available from the DA.

The parent material must be true to type for the variety.

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**VARIETAL IDENTITY AND PURITY :**

**PROVISIONS CONCERNING THE VARIETY FOR CATEGORY**

**Annex I. Minimum conditions to be satisfied in the production of Pre-basic TC seed potatoes (Annex 1)**

**Minimum conditions to be satisfied by the crop (Annex II)**

**Minimum conditions to be satisfied by direct progeny of seed potatoes (Annex IV)**

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#### TOLERANCES FOR SEED POTATO CERTIFICATION

	Pre-basic TC	Pre-basic	Basic class I	Basic class II	Certified class I	Certified class II
<b>2. Crop (per cent of plants)</b>						
Blackleg	0	0	0,5	1	1,5	2
Virus tolerance	0	0,1	0,4 (0,2 severe)	0,8 (0,4 severe)	2 (1 severe)	10 (2 severe)
Other varieties and off types	0	0.01	0.25	0.25	0.5	0.5

# UNECE STANDARD S-1

## Certification and commercial quality

### Control of SEED POTATOES

#### TOLERANCES FOR SEED POTATO CERTIFICATION

	Pre-basic TC	Pre-basic	Basic class I	Basic class II	Certified class I	Certified class II
<b>4. Direct progeny (per cent of plants)</b>						
Other varieties and off types	0	0.01	0.25	0.25	0.5	0.5
Virus (%)	0	0.5	2 (1 severe)	4 (2 severe)	1 (5 severe)	10

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**DESEASES AND PESTS : Minimum**  
**requirements :**

**Seed potatoes shall be substantially free from injurious diseases and pests and from any defects likely to impair their quality as seed. They shall be substantially dry outside and, in general, of normal shape for the variety.**

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Virus tolerance	0	0,1	0,4 (0,2 severe)	0,8 (0,4 severe)	2 (1 severe)	10 (2 severe)
Other varieties and off types	0	0.01	0.25	0.25	0.5	0.5



## Contrôles en culture

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#### ANY TOLERANCE FOR THESE PESTS

	Pre-basic TC	Pre-basic	Basic class I	Basic class II	Certified class I	Certified class II
<b>1. Crop and lot</b>						
Globodera rostochiensis (soil tolerance)	0	0	0	0	0	0
Globodera pallida (soil tolerance)	0	0	0	0	0	0
Synchytrium endobioticum	0	0	0	0	0	0
Clavibacter michiganensis	0	0	0	0	0	0
Ralstonia solanacearum	0	0	0	0	0	0
Potato spindle tuber viroid	0	0	0	0	0	0
Tomato stolbur	0	0	0	0	0	0
Meloidogyne chitwoodi and fallax	0	0	0	0	0	0
Ditylenchus destructor	0	0	0	0	0	0

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#### TOLERANCES FOR SEED POTATO CERTIFICATION

	Pre-basic TC	Pre-basic	Basic class I	Basic class II	Certified class I	Certified class II
<b>3. Lot (per cent of Tubers)</b>						
Earth & extraneous matter (%)	1	1	2	2	2	2
Dry & wet rot (not caused by <i>Synchytrium e. Clavibacter m. Ralstonia s.</i> ) (%)	0	0.2	1	1	1	1
External defects	3	3	3	3	3	3
Shrivelled tubers	0	0.5	1	1	1	1
Scab (common and netted)	0	5 (33.3)*	5 (33.3) *	5 (33.3) *	5 (33.3) *	5 (33.3) *
Powdery scab	0	1 (10) *	3 (10) *	3 (10) *	3 (10) *	3 (10) *
Rhizoctonia	0	1 (1) *	5 (10) *	5 (10) *	5 (10) *	5 (10) *
Total tolerances (%)	3	5	6	6	6	6

The figure in brackets is the allowable % surface area covered: a tuber is deemed to be affected by the disease only if surface area affected exceeds the specified allowable surface tolerance.



**Contrôle des lots**

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#### TOLERANCES FOR SEED POTATO CERTIFICATION

	Pre-basic TC	Pre-basic	Basic class I	Basic class II	Certified class I	Certified class II
<b>4. Direct progeny (per cent of plants)</b>						
Other varieties and off types	0	0.01	0.25	0.25	0.5	0.5
Virus (%)	0	0.5	2 (1 severe)	4 (2 severe)	1 (5 severe)	10



## Control précultures



## Laboratory of nematodology

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**Derogation from classification**

**Producing countries are, however, free to create within the categories and classes provided for in paragraph B. classes which are subject to specific requirements.**

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**Sampling :**

**Sampling of seed potatoes for certification purposes shall be carried out officially or under official supervision.**

**Sampling methods are included in UNECE Standard**



## Soil sampling

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**Comparative tests :**

**It is recommended that trials be established by national certifying authorities to ascertain the condition of the seed potatoes certified according to this standard.**

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**SIZING REQUIREMENT OTHER THAN PREBASIC TC**

- **The lot shall conform to distribution of tuber sizes of the harvested**
- **Sizing is expressed in multiple of five**
- **The maximum variation in size between tubers does not exceed 20 mm**
- **Minimum size : 25 mm**
- **Minimum size tolerance in per cent by weight of tubers : 3% smaller et 3% larger than the size indicated**

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**PACKAGING**

- a) *Conditions of containers : bags new, other containers clear***
- b) *Closing of containers : closed officialy or under official control***
- c) *Nature of contents of units of presentation* : *each container shall contain tubers of the same variety, category, class, size and origin***

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**LABELLING :**

- Official label : each container shall bear on the outside an official label in accordance with annex V especially for the color following the category**
- b) Official statement : of the same colour and showing at least the particulars indicated under 3,5 and 7 in annex V**
- c) Re-labeling : date of re-closing**
- d) Supplier's label : each container may be accompanied by special label of the supplier**
- e) Chemical treatment : shall be indicated**

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## **PRACTICAL USES**

- **UNECE standard harmonizes existing national standards.**
- **Facilitates fair international trade and prevents barriers to trade;**
- **Improves producers' profitability and encourages production of high-quality produce;**
- **Protects consumer interests.**

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**PRACTICAL USES**

**The UNECE standard is the unique international tribune to discuss about Certification : Varietal, Diseases, technology standard**

**The international experts improve every year this standard. They introduce reference for diseases, methods to analyse, methods to sampling, the rule for international dispute, etc**

# CONCLUSION UNECE STANDARD

- **The UNECE standard of seed potatoes is the certification reference for a lot of countries**
- **This standard is recognised inside another standard like EPPO, IPPC, etc.**
- **Facilitates fair international trade and prevents barriers to trade**

# CONCLUSION UNECE STANDARD

- **Importing countries may apply additional or more stringent requirements in respect to diseases and pests, if :**
  - **The same requirement is applied to domestic production,**
  - AND**
  - **These requirements are justified to prevent introduction or spread of these diseases and pests which do not exist there or which seem particularly injurious to the crops in that country or in any part of its territory**

# CONCLUSION UNECE STANDARD

**The framework of UNECE Standard in early 1960's was largely adopted by EU as the basis for providing conditions and rules for harmonised trading of seed potatoes within the EU. In effect, this means that currently a version of UNECE Standard governs international trade amongst 27 countries.**

**The UNECE Standard is subject to change and review through the work of the Specialised Section on Seed Potatoes, meeting annually in Geneva.**

**Recent changes include the provision of conditions and tolerances for pre-basic seed potatoes, growing crop tolerances, use of field generation marking, tolerances for powdery scab and shrivelled tubers, improved representations of surface area coverage for specific diseases. A list of major diseases and pests affecting potatoes has also developed as a supplement along with images and a basic description of symptomology, sampling methods**

## **CONCLUSION UNECE STANDARD**

**Its development can help the marketing of seed potatoes in the world and to help to fight against the hunger in the world which is a major point today**

More about UNECE

[Http://www.unece.org/trade/agr/welcome.htm](http://www.unece.org/trade/agr/welcome.htm)



## Contrôles en culture