



The quality of seed potatoes is an important factor in determining the yield and health of the harvested crop. Developed by the United Nations Economic Commission for Europe (UNECE), the UNECE Standard for Seed Potatoes sets common terminology and minimum commercial quality requirements for the certification of high-quality seed intended for marketing internationally.

It is a unique international frame of reference, covering all aspects related to seed-potato certification: (a) varietal identity and purity; (b) genealogy and traceability; (c) diseases and pests; (d) external quality; (e) sizing of tubers; and (f) labelling.

### **QUALITY REQUIREMENTS**

The Standard defines minimum requirements for seed potatoes at the export-control point, after preparation and packaging. It describes tolerances for pests, diseases and defects in the crop, lot or succeeding crop (direct progeny). Countries may set additional national requirements to reflect their specific soil, climatic and other conditions.

### **CLASSIFICATION**

Requirements are set for three categories of seed potatoes: Pre-basic, Basic and Certified, in descending order of quality. Additional choice of quality is offered by two classes within each of the three categories. Classification by field generation is optional.

Within these categories and classes, countries producing seed potatoes are free to create national classes that are subject to specific national requirements. The Designated Authority is responsible for the maintenance of classification data in order to provide traceability.

### **MINIMUM CONDITIONS**

The Standard specifies minimum conditions to be satisfied: (a) by soil in which seed potatoes are grown; (b) by crop (tolerances for the proportion of growing plants not true to the variety, affected by blackleg and showing symptoms of virus diseases); (c) by lot; and (d) by direct progeny (succeeding crop, tolerances for the proportion of growing plants not true to the variety and showing symptoms of virus diseases).

### **VARIETIES**

The Standard considers varieties acceptable for trade if an official description and a reference sample are available to the Designated Authority. The variety should be distinct, uniform and stable according to the guidelines of UPOV (International Union for the Protection of New Varieties of Plants) and have a denomination so that it can be identified.



The Standard recommends rules on packaging, sealing and labelling to ensure the identity of the seed.

It also provides guidelines for comparative trials of plants grown from seed potatoes sampled from marketed lots.

A Guide to Diseases, Pests and Defects, containing a basic description of each disease with illustrative photographs and their status in certification, supplements the Standard.



The Standard is intended to be used by Designated Authorities to ensure that seed potatoes produced for international markets comply with agreed norms.



Using the common terminology and harmonized quality requirements contained in the Standard assists buyer and seller in understanding the quality of seed potatoes being marketed in different parts of the world and minimises the risk of technical barriers to trade.

The Standard also provides a framework for joint work by public- and private-sector operators.

The UNECE Specialized Section on Standardization of Seed Potatoes, made up of national certification experts, regularly reviews and updates the Standard to reflect changes in production and marketing, in the evolution of harmful organisms and in the development of new techniques for certification. Any member of the United Nations can participate, on an equal footing, in the activities of the Specialized Section.

You can learn more about the UNECE work on seed potatoes by visiting our website:  
[www.unece.org/trade/agr/welcome.htm](http://www.unece.org/trade/agr/welcome.htm).

### TOLERANCES FOR SEED POTATO CERTIFICATION<sup>1</sup>

	Pre-basic TC	Pre-basic	Basic Class I	Basic Class II	Certified Class I	Certified Class II
<b>1. Crop and lot</b>						
<i>Globodera rostochiensis</i> (soil tolerance)	0	0	0	0	0	0
<i>Globodera pallida</i> (soil tolerance)	0	0	0	0	0	0
<i>Synchytrium endobioticum</i>	0	0	0	0	0	0
<i>Clavibacter michiganensis</i>	0	0	0	0	0	0
<i>Ralstonia solanacearum</i>	0	0	0	0	0	0
Potato spindle tuber viroid	0	0	0	0	0	0
Tomato stolbur	0	0	0	0	0	0
<i>Meloidogyne chitwoodi</i> and <i>fallax</i>	0	0	0	0	0	0
<i>Ditylenchus destructor</i>	0	0	0	0	0	0
<i>Phthorimaea operculella</i>	0	0	0	0	0	0
<b>2. Crop (per cent of plants)</b>						
Black leg	0	0	0.5	1	1.5	2
Virus tolerance	0	0.1	0.2	0.8	2	6
Other varieties and off-types	0	0.01	0.25	0.25	0.5	0.5
<b>3. Lot (per cent of tubers)</b>						
Earth and extraneous matter	1	1	2	2	2	2
Dry and wet rot (not caused by <i>S. endobioticum</i> , <i>C. michiganensis</i> , <i>R. solanacearum</i> )	0	0.2	1 (0.5 wet rot)	1 (0.5 wet rot)	1 (0.5 wet rot)	1 (0.5 wet rot)
External defects	3	3	3	3	3	3
Shrivelled tubers	0	0.5	1	1	1	1
Chilling injury	0	2	2	2	2	2
Pest damage	0	4	4	4	4	4
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
<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	1	4	8	10

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

<sup>1</sup> Based on the 2014 version of the Standard. Updated versions can be found at: [www.unece.org/trade/agr/standard/potatoes/pot\\_e.html](http://www.unece.org/trade/agr/standard/potatoes/pot_e.html)