

TC 34

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# INTERNATIONAL STANDARD **ISO** 5525



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## **Potatoes — Storage in the open (in clamps)**

*Pommes de terre — Entreposage en plein air (en prismes)*

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## FOREWORD

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Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council.

International Standard ISO 5525 was developed by Technical Committee ISO/TC 34, *Agricultural food products*, and was circulated to the member bodies in May 1977.

It has been approved by the member bodies of the following countries :

Austria	Israel	Romania
Czechoslovakia	Mexico	South Africa, Rep. of
Egypt, Arab Rep. of	Netherlands	Spain
Ethiopia	New Zealand	Turkey
Hungary	Philippines	U.S.S.R.
India	Poland	Yugoslavia
Iran	Portugal	

The member body of the following country expressed disapproval of the document on technical grounds :

U.S.A.

# Potatoes – Storage in the open (in clamps)

## 0 INTRODUCTION

Storage of potatoes with or without artificial cooling is dealt with in ISO 2165, *Ware potatoes – Guide to storage*. However, in some countries, most potatoes are commonly stored in clamps (temporary silos) constructed outdoors. In these countries, the technology of storage depends largely on local conditions, but simple methods are in widespread use. It has therefore been found necessary to make these methods the subject of an International Standard.

## 1 SCOPE AND FIELD OF APPLICATION

This International Standard lays down guidelines relating to the technique of storing potatoes outdoors in clamps, to allow a quality suitable for consumption to be maintained.

These guidelines apply only in regions with temperate climates.

## 2 CONDITIONS OF HARVESTING AND PUTTING INTO STORE

### 2.1 Varieties

The methods of storage outlined refer equally to all varieties of potatoes the keeping of which is of economic interest. Differences due to the weather, soil conditions and other environmental factors in various countries and growing areas are considerably greater than differences in varieties.

### 2.2 Harvesting

Potatoes intended for storage shall be harvested when fully mature, which is generally shown by the fact that the skin cannot be rubbed off by hand, even near the ends.

In the course of digging up and gathering, especially if the latter is carried out by mechanical means, great care shall be taken to prevent damage. This is particularly important to avoid storage losses.

### 2.3 Quality of potatoes for storage

The potatoes to be stored shall be in perfect condition, free from tubers damaged by disease. They shall be relatively free from adhering soil. If notable quantities of soil are

present, the potatoes shall be subjected to pre-cleaning or shall be stored apart from cleaner ones. Potatoes which have been exposed to rain shall be dried and marketed as quickly as possible, as they are likely to suffer rapid deterioration if stored.

Tubers of smaller size than that specified in standards shall be separated from the potatoes to be stored, even if they are healthy.

### 2.4 Various treatments

Chemicals may be applied in order to prevent sprouting, in compliance with the directions in force in certain countries.

### 2.5 Putting into store

Mature potatoes of suitable quality shall be put into store as soon as possible after harvesting and then disturbed as little as possible.

The potatoes should be placed in the clamp with the utmost care in order to avoid damage to the tubers.

Hydraulic tipping trailers should be used for the clamp face, the wheels being blocked in order to prevent their running into the clamp face. The trailers should be tipped slowly to allow the tubers to roll as gently as possible into the clamp. The potatoes should be arranged using a blunt-edged fork equipped either with buttons on the ends of the prongs or with a bar welded across the prongs in order to prevent spearing of the tubers. The use of mechanical lifts should be avoided whenever possible, but, if necessary, a bucket elevator using buckets with blunt edges instead of tines may be used.

Potatoes put into store immediately after harvesting respire at an advanced rate and, in consequence, show a rise in temperature. This process should not be prevented since it accelerates the healing of wounds, etc.

### 2.6 Siting and shape of clamps

The clamps shall be situated on a water-free site, preferably in a position sheltered on the side from which the most severe weather is to be expected, and also near to a road. The clamps shall extend, preferably, in a north-south direction so that the sun may prevent frost from persisting too long in the walls and possibly reaching the potatoes. The clamp site should be reasonably level and clean.