

INTERNATIONAL STANDARD

**ISO
9930**

First edition
1993-09-15

Green beans — Storage and refrigerated transport

Haricots verts — Entreposage et transport réfrigéré



Reference number
ISO 9930:1993(E)

Foreword

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International Standard ISO 9930 was prepared by Technical Committee ISO/TC 34, *Agricultural food products*, Sub-Committee SC 14, *Fresh fruits and vegetables*.

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Case Postale 56 • CH-1211 Genève 20 • Switzerland

Printed in Switzerland

Green beans — Storage and refrigerated transport

1 Scope

This International Standard gives guidance on conditions for the successful cold storage and long-distance refrigerated transport of green (snap) beans belonging to the species *Phaseolus vulgaris* L. and *Phaseolus coccineus* L., intended for direct consumption or industrial processing.

2 Normative reference

The following standard contains provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the edition indicated was valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent edition of the standard indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 2169:1981, *Fruits and vegetables — Physical conditions in cold stores — Definitions and measurement*.

3 Definitions

For the purposes of this International Standard, the definitions given in ISO 2169 apply.

4 Conditions for harvesting and storage

4.1 Varieties

The number of green (snap) bean varieties changes year by year with their economical availability depending extensively on the seed trade. Suitable methods of storage depend, therefore, on the quality of the pods rather than the variety, although yellow varieties have somewhat better storage properties.

4.2 Harvesting

The product is harvested at an unripe stage (i.e. harvest maturity). The pods should be easily broken by hand and the seeds should be adequately small and tender. Mechanically harvested beans are only suitable for storage when their quality meets the requirements specified in 4.3.

4.3 Characteristics for storage

The main characteristics of species suitable for cold storage are the following.

The pods shall be

- whole and tender;
- free from any defect including mechanical defects;
- clean and dry;
- of a size, shape and colour characteristic of the variety concerned; and
- closed and not withered.

4.4 Packing

The beans shall be packed in such a way as to protect them properly, and to retain their good quality and perfect condition during transport. They may be packed in wooden or plastic crates covered with a coarsely perforated film. Each package may contain green bean pods up to a maximum of 12 kg.

5 Optimum storage and transport conditions

5.1 Temperature

Optimum temperature limits for the beans are between 5 °C and 10 °C for 7 to 10 days. The temperature should not be lower than 5 °C and should never exceed 10 °C. Green beans exposed to higher tem-