

ISO

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION

ISO RECOMMENDATION R 931

GREEN BANANAS
GUIDE TO STORAGE AND TRANSPORT

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BRIEF HISTORY

The ISO Recommendation R 931, *Green bananas – Guide to storage and transport*, was drawn up by Technical Committee ISO/TC 34, *Agricultural food products*, the Secretariat of which is held by the Magyar Szabványügyi Hivatal (MSZH).

Work on this question by the Technical Committee began in 1964 and led, in 1966, to the adoption of a Draft ISO Recommendation.

In April 1967, this Draft ISO Recommendation (No. 1213) was circulated to all the ISO Member Bodies for enquiry. It was approved, subject to a few modifications of an editorial nature, by the following Member Bodies :

Australia	Iran	Romania
Bulgaria	Israel	Thailand
Colombia	Korea, Rep. of	U.A.R.
Czechoslovakia	Netherlands	United Kingdom
France	New Zealand	U.S.S.R.
Greece	Norway	Yugoslavia
Hungary	Poland	
India	Portugal	

No Member Body opposed the approval of the Draft.

The Draft ISO Recommendation was then submitted by correspondence to the ISO Council, which decided, in January 1969, to accept it as an ISO RECOMMENDATION.

GREEN BANANAS

GUIDE TO STORAGE AND TRANSPORT

INTRODUCTION

Bananas should be stored, before transport from the exporting country to the place of consumption and throughout the period of transport, in the green condition and, therefore, in the preclimacteric phase.

A banana is said to be in the preclimacteric phase when the process of ripening has not yet been initiated.

Harvesting of bananas takes place throughout the year in tropical and sub-tropical regions having considerable variations of an ecological and climatic kind. It follows that the state of dimensional development (fulness) of the banana does not afford a precise criterion of its state of ripeness. A thin banana (in a period of drought) may be in an advanced state of ripeness.

Moreover, the state of ripeness to be chosen depends on the duration of transport, which varies considerably (from a few days to 3 weeks).

The producer should time the cutting of the bananas so that the degree of ripeness (as estimated from their fulness) is compatible with the transport envisaged. The time of cutting therefore depends on two distinct factors : the duration of refrigerated transport and the physiological state of the banana. For this reason the clause dealing with the degree of ripeness (see clause 2.1) cannot be universally applicable and can provide only recommendations of a general kind which serve as a pointer to the producer, who has to decide on his own criteria for cutting.

As regards examination for ripeness, a bunch of bananas may be likened to a bunch of grapes with fruit in different states of ripeness, and it is therefore essential to specify with what fruit the check is to be carried out.

The state of the bananas (condition of health, wounds, etc.), when they enter the store, has an influence on the storage life, and this is the justification for making recommendations on this subject.

The same applies to the precautions to be taken between harvesting the bananas and putting them into the store. The high temperature of the producing areas and exposure to sunlight can appreciably reduce the storage life.

The term *cultivar* is used to indicate that the varieties of bananas entering into commerce are cultivated varieties.

Anti-fungal treatments of the ends of the main stalk or ends of the cushions have not been mentioned, because it is not possible to indicate treatments which are recognized beyond dispute.

1. SCOPE

This ISO Recommendation describes conditions for the successful keeping, with or without artificial cooling of green bananas, *Musa* sp., in the preclimacteric phase during storage before transport from the place of production to the place of consumption and during maritime transport.