

BOOK REVIEWS

Modern Potato and Vegetable Storage. Translated by B. R. Sharma (Amerind Publishing Co. Pvt. Ltd., 56, Janpath, New Delhi 110 001, 1983, pages 188, Price not mentioned.

This, an English translation of the Russian book *Sovremennye Kartofele-i Ovoshchekhranilishcha* by I. L. Volkind, N. N. Roslov and P. A. Mukhanov and published by Kolos Publishers, Moscow in 1971.

The book consists of five sections, namely I-Fundamentals of modern storage technology for potatoes and vegetables, II-Modern standard storages, III-Storage equipment, IV-Utilization of machinery in modern storages, and V-Economic efficiency of capital investment in the construction and reconstruction of storages.

In section I, the composition of potato, carrot, onion and cabbage is briefly described. This is followed by the description of the process of wound healing, which plays a very important part in determining the performance of stored potatoes and carrots. Carbohydrate interconversions in the potato tubers stored at different temperatures and their consequences are also described in some detail.

Section II includes a description of piles for the storage of potatoes, cabbage and onions and simple buildings in which the produce is stored in heaps. The method for calculation of heat load and the thickness of insulation to be provided in the stores are very useful. This section also includes techno-economic parameters for potato, root crop and cabbage storages. However, these are of little use, as the data relate to regions located in areas where temperatures during storage season are as low as -20° to -40° C. There is a description of requirements for the storages for onions, as well as the construction of stores. These are also designed for use in areas where temperatures are estimated to be -20° C.

The section on storage equipment describes conveyor systems for loading and unloading of the produce. These conveyors can handle upto 30 tons per hr. Such conveyors can be used with advantage in cold storages in the country. Since the cost of such equipment may be high, it may be desirable that agencies such as NAFED may buy and provide to customers on rental basis.

Proper circulation of air in any store is of vital importance as it results in maintaining the desired quality of produce. For maintaining the desired temperature (with heating or cooling) and humidity,

either outside air can be used or the air inside the store can be recirculated or a mixture of inside and outside air can be circulated. Details of such systems in use in USSR are given. Since complex machinery is used to achieve these, the systems are automated. One subsection deals with factors to be considered for choosing the equipment for providing adequate ventilation during curing, storage during winters (temperatures up to -40° C), spring and summers.

In the section on utilization of machinery in modern storages, procedures for recording temperature and humidity in the stores is described. Details of temperature and humidity requirements during different periods of storage of potatoes and onions are given. This section is of considerable use to those dealing with storage of potatoes and onions in the country as the basic principles can be utilized with an advantage to maintain the quality of the produce.

The final section deals with the methods for calculating the economic efficiency of storages. Three methods are used for calculation of the economic efficiency, i) capital investment, ii) working cost and iii) the preservation of produce. However, the most economic storage should be based on the capital investment, low working cost and efficient preservation of produce. But under some circumstances, it may be difficult to achieve these objectives and a workable solution may have to be devised. In countries, where the consumption of potatoes and other vegetables is low and losses during storages are very high, it may be necessary to evaluate economic efficiency by the third criterion-the preservation of the produce.

The section also contains information in respect of the other 2 criteria also. But the costs mentioned may not be applicable even in USSR as these figures relate to the period prior to the publication of the Russian language edition in 1971.

The book contains a very large number of diagrams of different types of stores, but the units of measurement are not mentioned, as such the utility of these diagrams is reduced considerably.

There are a number of errors throughout the text. Most of these could be due to the fact that the translator and the general editor are not conversant with the terms but spelling mistakes such as 'hecling' (for healing) and 'roting' (for rotting) on pages 4 and 126, respectively, could have been avoided.

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PROF. T. R. GOVINDACHARI SIXTYETH BIRTHDAY COMMEMORATION AWARD IN ORGANIC CHEMISTRY

Applications or nominations (by Fellow Organic Chemists) are invited for the above award instituted by the Prof. T. R. Govindachari 60th Birthday Commemoration Committee. Applications/Nominations giving bio-data (4 copies) inclusive of a five page summary of original research accomplishments and a list of reprints must reach the Registrar, University of Madras, Madras 600 005 before 31st January 1984. Each application or nomination must also be accom-

panied with one set of reprints of publications. The value of the award is Rs. 5000/- and the award is to be made to a distinguished Indian Organic Chemist working in India with a minimum of 15 years of teaching cum research experience. Applicants can get a copy of other terms and conditions of the award by sending a self-addressed and stamped (55 paise) envelope to The Registrar, University of Madras, Madras 600 005.

INTERNATIONAL CONFERENCE ON 'FIRST SPACE STEEL CONSTRUCTION:PRACTICAL DESIGN'

As part of its ECSC—Steel research activities, the Commission, of the European Communities, in conjunction with the European Convention for Constructional Steel work and the West European Steel Information Centres, is organising an International conference on 'Fire safe steel construction:practical design' in Luxemburg, 11-13 April, 1984.

The conference is aimed mainly at architects, consulting engineers, civil engineers, building officials fire fighters, insurers and investors.

The conference will provide information on the methods and recommendations which enable a practical and reliable approach to be made to the design and construction of buildings with fire resistant steel structures and to the search for solutions which can meet economic, architectural and safety requirements. The participants will be provided with the summaries of papers; and the proceedings of the Conference. Further particulars may be had from: P. P. Rotondo C. C. E. DG XIII-A2, B. P. 1907, LUXEMBOURG.(F.R.G)