



DRYING OF APRICOTS

The main traded apricot product is dried apricot. Dried apricots are a good source of vitamin A, iron and sugar, and where they are in abundance, their processing can provide valuable income-generating opportunities. The methods of drying apricots vary from simple sun drying through solar drying to large-scale artificial dryers. The traditional sun drying of apricots involves destoning the fruit and placing it on flat rocks for approximately six to nine days. This produces a dried fruit with an uneven dark brown colour and a tough, texture.

Sulphur dioxide is normally added to the fruit as a preservative and to give the dried product a brighter orange colour. Sulphur fumigation is a hygienic, low-cost preservation technique, that maintains colour of the food. There is a small but growing market for apricots that have not had sulphur dioxide added, in 'health food shops' in Europe and the United States of America.

To produce a high quality dried apricot product the following recommendations need to be followed:

Harvesting

Traditionally, apricots are harvested by shaking branches and letting fruit fall to the ground. The fruit is then either eaten fresh, sun-dried or heaped in fields prior to pit removal. This practice, common in many countries, of shaking the trees and letting the fruit fall to the ground, results in damaged, bruised and dirty fruit. A high quality dried apricot cannot be produced from a poor quality apricot so this method of harvesting should be discouraged. In order to reduce damage, fruit can be collected in outspread sheets held above ground level.



Figure 1: Collecting apricots

The apricots should be picked by hand and placed carefully in a harvesting basket. The harvesting basket and the hands of the harvester should be clean.

For the best quality dried product the apricots should be picked when they are 'eating ripe' (firm and sweet) rather than 'juicy ripe' (soft and sweet).

Preparation

Damaged and bruised fruits have to be rejected as they produce low quality dried apricots. Under-ripe apricots have to be rejected as these produce a bland colourless product and do not absorb sufficient sulphur dioxide during sulphuring. Over-ripe apricots should be rejected as they absorb too much

The apricots should be washed in clean water. If dried apricot halves are being produced, the apricots should be split into two and the kernels removed. The pits (or stones) are removed by running water through baskets full of the fruit and separating the flesh from the stone with either hands or feet. The pits are then cracked to obtain the kernel. The two halves should be separated. This produces a more attractive product than when the two halves are left connected. Their kernels can be either consumed or converted into cooking oil. Bitter pitted fruit can be fed to animals.

Sulphuring

Sulphur dioxide will prevent browning of the apricots. The sulphur dioxide can either be added by dipping the apricots in a solution of sodium metabisulphite (sulphiting) or by placing the fruit in a chamber in which sulphur is burnt (sulphuring). Adding sodium metabisulphite can help to preserve the colour, although there are strict limits to the amount to add. Many people prefer the taste of fruits that are not treated with this preservative. The colour can

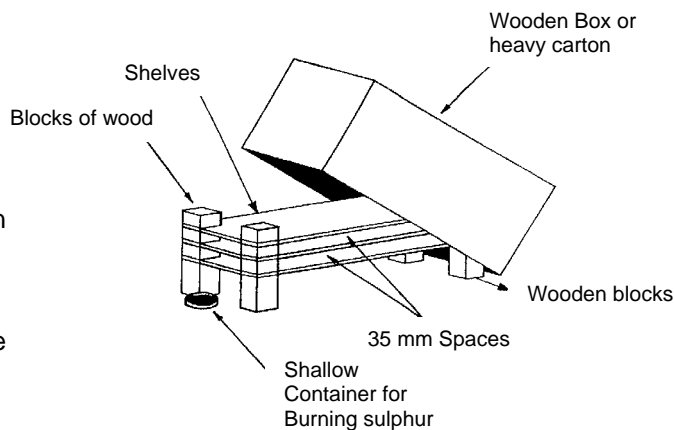


Figure 2: Traditional sulphuring

be regulated without the addition of chemical preservatives. Sulphuring is the better solution because in sulphiting, there is often an uneven penetration of sulphur dioxide, the fruit is made wet which increases the amount of drying needed and some soluble nutrients are lost.

The apricots need to be placed in a chamber in which sulphur is burnt for 2-3 hours. Figures 2 and 3 show traditional sulphuring chambers.

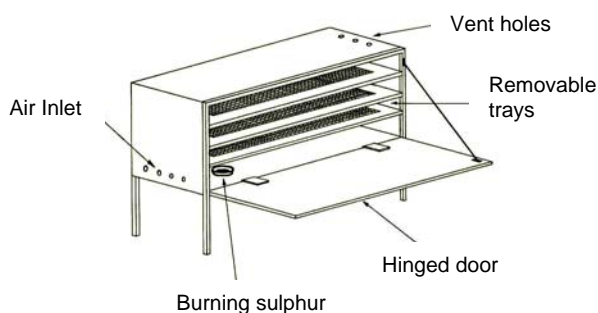


Figure 3: Traditional sulphuring

Figure 4 shows a chamber used by the Aga Khan Rural Support Programme in North Pakistan. 2-4g of sulphur is needed for each kg of fresh apricot. Care needs to be taken during the sulphuring to prevent sulphur dioxide from escaping from the chamber as it will cause breathing difficulties if inhaled.

Drying

Sun drying produces a dried apricot with a more desirable colour than artificial drying. Solar drying can be used to reduce dust and dirt contamination. If the harvest coincides with the rainy season, an artificial drier may be essential.

The apricots should be placed in the drier with their cups upwards and dried to a moisture content of 15% (wet basis).

There can be several reasons for the spoilage of

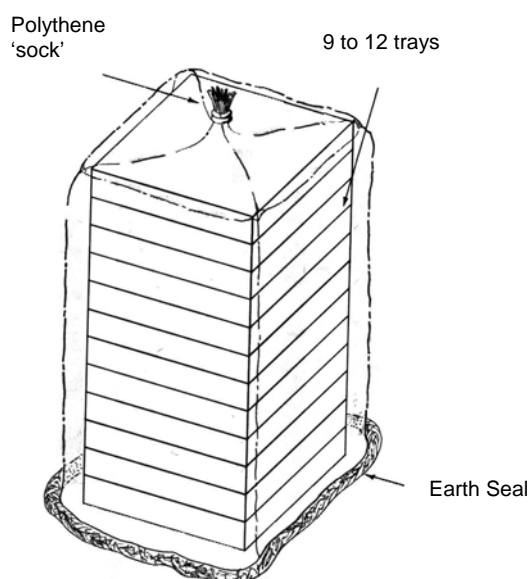


Figure 4: AKRSP sulphuring tent

technical brief

the fruit - the most likely one being that the drying process is taking too long, resulting in chemical reactions taking place within the cut fruit. It is important to ensure that good quality fruit is used that is not over-ripe. Also, the fruit pieces should be thinly sliced to speed up the drying process.

Packaging

All that is required is packaging in simple plastic bags with attractive labels. The plastic has to be thick enough to prevent it being damaged by the dried apricots. The use of a polythene sealing machine will produce a more attractive finished product.

The processing of apricots can improve the returns obtainable from the sale of crops, especially when the quality of the product is monitored and kept to a high standard.

References and further reading

Drying of Foods Practical Action Technical Brief

Drying Technology Practical Action Technical Brief

Tray Dryer Practical Action Technical Brief

Drying, Food Cycle Source Book 6 UNIFEM and ITDG Publications 1995

Preservation of Fruit and Vegetables: Agrodok 3, Agromisa 1997

Try Drying It! Case Studies in The Dissemination of Tray Drying Technology, ITDG Publishing 1991

Producing Solar Dried Fruit and Vegetables for Micro and Small scale Rural Enterprise Development, A series of Practical Guides' written by the Natural Resources Institute.

Useful organisations and contacts

Agromisa
Postbus 41
6700 AA Wageningen
Netherlands
Tel: +31 (0)317 412217
Fax: +31 (0)317 419178
E-mail: agromisa@agromisa.org
Web: <http://www.agromisa.org>
Agromisa is a Dutch non-profit organisation affiliated with the Agricultural University of Wageningen in the Netherlands. Agromisa provides information and advice on small-scale sustainable agriculture and related topics in order to support and strengthen self-reliance of the rural populations in the South.

NR International
Central Avenue
Chatham Maritime
Kent
ME4 4TB
United Kingdom
Tel: +44 1634 880088
Fax: +44 1634 880066/77
Email: info@nrint.co.uk
Website: <http://www.nrinternational.co.uk/>

Henry Doubleday Research Association
Tropical Advisory Service
Ryton Organic Gardens
Coventry
CV8 3LG
United Kingdom
Direct Dial: +44 (0) 24 7630 8206
Switchboard: +44 (0)24 7630 3517
Fax: +44 (0) 1203 639229
E-mail: ove-enquiry@hdra.org.uk
Web: <http://www.hdra.org.uk/>
The HDRA is the leading organisation for promoting, researching and demonstrating organic horticulture and agriculture in the UK. For several years, the HDRA International Research Department has been running an overseas programme.

Food and Agriculture Organization of the United Nations
Viale delle Terme di Caracalla
00100 Rome
Italy
Fax: (+39) 06 570 53152
Email: FAO-HQ@fao.org
Web: <http://www.fao.org/>