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Herbs and spices

23.1 INTRODUCTION

‘Herbs and spices’ describes those plant parts which are especially valued because of their taste, their aroma, their medicinal or preservative action and/or colour.

The name herbs is more specifically applied to all herbaceous plants of which mostly the fresh leaves are used.

Spices are the aromatic or sharp-tasting dried parts of plants, including root, fruit, tree bark or leaf. They are of tropical origin and are used in small quantities in food preparation and by the food processing industry.

In prehistoric times, and also in the time of the ancient cultures, the borderlines between plants which were used for food (vegetables), or as herbs in medicine, or as beautifying aids were not sharp. About 4000 years ago the medical application of herbs such as marjoram and mint had already been described. The use of spices such as cinnamon and cassia (Chinese cinnamon) and of creams and ointments in which volatile oils were used also originates from this early period.

From the Far East and southern Arabia, spices and aromatic compounds were transported to Egypt. The Phoenicians supplied the Greeks with spices and aromatic types of resin. The Greek doctor Hippocrates (about 400 BC) had 400 medical remedies based on spices described in books. During the peak of prosperity of the Roman Empire an extensive trade in herbs and spices was started. From Asia, spices like cinnamon, cardamom, cloves and pepper were brought to Constantinople.

From the twelfth century onwards, the views and thoughts on health and sickness changed. Epidemics were no longer the result of bad air, which could be got rid of with the scent of incense and spices. More interest was shown in everyday food. Especially in the monasteries, the cultivation and use of herbs and vegetables was stimulated. In the beginning, the cultivation for the most part was done in monastery gardens. Later, more and more people started cultivation. The demand for herbs became so great around 1800, that they were cultivated on a larger scale to supply the demand from doctors, pharmacists and others. The still-famous gardens such as the Leidse Hortus Botanicus, Jardin de Plantes in Paris and the Botanical Garden in Oxford originate from this period.
Applications
The present-day applications of herbs and spices are manifold.

— Medical science makes use of the medicinal compounds from herbs and spices. For instance: eucalyptus oil has a slight expectorant action; valeric oil acts on the central nervous system; and quinine has an anti-microbial action. Medicinal spices, such as were employed in the herbal methods of olden days, are once more employed in homeopathic and anthroposophical healing.

— Some herbs contain compounds with a preserving action. For instance: marjoram, nutmeg, pepper and paprika act as anti-oxidants; and the oils in cinnamon, cloves and garlic have germicidal characteristics. Extracts from species of the onion genus contain anti-microbial agents and garlic and onion juice have a retarding effect on the toxin production of Clostridium botulinum.

— Herbs, and extracts or compounds from herbs, find a use in the cosmetic and perfume industry because of the aromatic compounds which they contain, or because some compounds have a beneficial action on the skin, for instance camomile.

— In the food and drink industry and in the kitchen, herbs and spices are mainly used to give a typical smell or taste to products or dishes or to enhance their appearance. The hedonistic value of a product will be increased by aroma and smell compounds, and through a varied use of herbs and spices more variation in smell and taste is possible.

Fresh herbs
In northern Europe herb cultivation takes place in open soil or under glass. The assortment of fresh garden herbs, distributed by way of the vegetable auctions, is very limited. The most commonly traded leaf herbs are parsley, celery, chives, cress and chervil.

The consumer will have to grow his own for a more varied use of herbs.

Use in the kitchen
For preference, herbs are used fresh. The leaf herbs have to be fresh green or firm; root and bulb plants not shrivelled and unsound. In the case of a number of herbs, the smell and taste are at their best if they are added, as fresh as possible, at the last moment to the dish; for instance, parsley, chives, dill, chervil and watercress. Other types have to cook with the dish to liberate the aroma; for instance, lovage, rosemary, marjoram, celery and thyme.

If, in everyday food, a generous portion of fresh herbs is used (for instance, of parsley, chives or cress) a contribution can be made to the requirement for vitamin C, β-carotene and the minerals iron, calcium, sodium and phosphorus.

Preserved herbs and spices
Herbs can only be kept fresh for a short time after harvesting, and most of them are not available during the winter months. A number of preserving techniques are used for fresh herbs, among others deep-freezing, canning and drying.

Herbs are always dried in the country of origin before they are exported.

Deep-freezing is especially suitable for the leaf herbs such as parsley, chives,