

THE CRACKER

March 2011
Edition 52, No.1

INC
international
Nut&DriedFruit

The Official Voice of the International Nut and Dried Fruit Council Foundation for the World Nut and Dried Fruit Trade

**BUDAPEST
CONGRESS
MAY 20-22**

**CHOCOLATE FORTUNES
IN CHINA**

**NUTS & DRIED FRUIT:
HEALTH TRENDS 2011**

www.nutfruit.org/cracker



NUTRITIONAL ATTRIBUTES OF NUTS THROUGH HISTORY

By Prof. Jordi Salas-Salvadó and Marta Guasch-Ferré. Prof. Salas-Salvadó, Chair of Human Nutrition Unit, Faculty of Medicine and Health Sciences, Universitat Rovira i Virgili, Spain. Member of the INC Scientific Committee.

Nut consumption in human societies dates back to ancient times. It is known that many nuts and dried fruits appeared in the Mediterranean Region and in Asia Minor, although some varieties have other origins. In this article, we consider only nuts that emerged and were principally distributed in the Mediterranean area (almonds, hazelnuts, pine nuts, pistachios and walnuts).

Nuts and fruits were probably the first types of food consumed by humans. There are evidences demonstrating the presence of almonds, pistachios and other presumably extinct hard nuts, together with pitted stones in Israel dating from the Pleistocene (780.000 BC) giving a reasonable indication of nut-cracking activity at this site(1).

Remains of pine nuts from the Mesolithic period have also been found in various caves, such as those in Nerja (Malaga, Spain) and Lattes in southern France, which prove the presence of the pine tree and the use of pine nuts, as well as other nuts, in the diet of human groups (2). In 1995, archaeologists found evidence of very large-scale Mesolithic nut processing in the Hebridean island of Colonsay (Scotland, UK) that dates back 9000 years. In addition to this, hundreds of thousands of burnt hazelnuts were found there (3), suggesting that an important commercial activity took place around these types of nuts.

Pistachio cultivation was widespread in the ancient Persian Empire (4). Moreover, other nuts such as walnuts from 7000 BC were found in Persia. In ancient Persia only the royalty ate walnuts, and they were known as Royal Walnuts (5).

Later, in the Early Bronze Age (3000-2000 BC) in the near eastern Mediterranean basin, there is evidence of the existence of home-grown almond trees. Almonds were also discovered in Tutankhamun's tomb in Egypt (c.1325 BC) (6). Pine nuts were also used in Egyptian culture for

medical purposes. In the book 'The physicians of Pharaonic Egypt' the author Paul Ghalioungui mentions pine nuts as one of the products that the ancient Egyptians used to cure illnesses (7).

From several sources we know that nuts were used widely in Greek civilization for their medical and nutritional properties. For example, almonds played an important role in the Greek diet; they were included in many recipes in ancient Greece, where they were used particularly in sauces and desserts (8). Hippocrates, the father of Western medicine, said that "Almonds are burning but nutritious; burning because they are oily and nutritious because they are fleshy" (9).

**"NUTS HAVE BEEN DIVERSELY
CONSIDERED IMPORTANT THROUGH
HISTORY FOR THEIR NUTRITIONAL AND
MEDICINAL PROPERTIES."**

We also have evidence of hazelnuts and pine nuts being used in the treatment of illnesses in this civilization. Greek doctors thought hazelnuts were moderately nutritional, but they believed they were difficult to digest if eaten raw and recommended toasting them (10). In his book *De Materia Médica*, Dioscorides said that pine nuts were astringent, had some calorific value and relieved coughs and chest infections, either on their own or after being mixed with honey (11). This author notes as well the use of hazelnuts in remedies for curing common colds and baldness.

Furthermore, in ancient Greece other nuts, like pistachios and walnuts, were also used as a source of energy. Pistachios were also known to the Assyrians and the Greeks as a medical drug, a potent aphrodisiac and an antidote against poisonous animal bites (12). Greeks used walnuts not only for food, but also as a medicine and they were considered astringent and good for digestion (13). Heraclides of Tarentum (c.2nd century BC), a Greek physician, suggested they stimulated appetite, and advised that they should be eaten at the beginning of a meal (14).

All these nuts were also used extensively in the Roman Empire. Almonds were included in various dishes, sauces and desserts in Apicius' book *De re coquinaria* (15). In his book, Apicius also listed spices, seeds and condiments that were essential in the kitchen, and among these were hazelnuts, which were used in sauces to season meat, fish and many other recipes (16). The Roman author Pliny also gave many medical uses for bitter almonds against headache and fever. On the other hand, he wrote that the remedial properties of sweet almonds were not so extensive; still however, they were considered to have a purgative nature, and were diuretic (17). Pistachios and walnuts were also well known in Europe towards the end of the Roman Empire. Walnuts were also mentioned in the principal Roman treatises on agriculture: *De Re Rustica* Varro, *De Re Rustica* Columella and *Naturalis Historia* (17).

Nuts were spread throughout northern Africa by the Arab cultures. In the Al-Andalus culture, for example, almonds were used in many recipes such as Alajú, a roasted honey dish based on an almond paste, nuts and sometimes pine nuts, toasted bread and spices. In fact, many of today's desserts made with almonds and honey in Spain and North Africa are likely to have an Arab origin. Almond milk was used extensively in Al-Andalus on festive occasions. It's white colour was a sign of purity, and it was used to

cure diseases. Indeed, almond milk was also consumed by children (18). Pine nuts and pistachios were used in the Al-Andalus culture as food, but also as a drug. Averroes, a renowned Andalusian jurist, philosopher and scholar, also believed that pine nuts increased male fertility and recommended using their oil as a remedy for stroke and weakness.

This author also mentioned that pistachio oil was very useful as medicine (19).

In contrast, it is known that in the Middle Ages, consumption of both fresh fruit and nuts was scarce. Due to the influence of Galen's doctrines, they were considered poor foodstuff and were often seen as the cause of some illnesses. In his book *Regimen Sanitatis*, the Catalan doctor Arnau de Vilanova tells us that "Hazelnuts, due to their nature provide some comfort to the liver, but harm the stomach and the head" (20). Hazelnuts

were eaten alone and with other nuts, but were not considered worth to mention in cooking documents or agricultural treatises in that period. This author also stated that pistachios were good for the liver and colds.

During the Renaissance, cuisine combined the flavours introduced by the Arabs with classical tastes. Nuts were therefore used in the same way as in previous centuries. For instance, hazelnuts are mentioned in the *Libre de Coch* or "Book of Stews" by the Catalan cook Ruperto de Nola (21). Almonds were also used in the preparation of many desserts, and were also used as oil and milk.

In conclusion, we could say that nuts have been diversely considered important through history for their nutritional or medicinal properties. Nuts have been used by different civilizations as drugs in the prevention and treatment of several diseases because of their antithermic, antialgic, digestive, aphrodisiac and other properties. This food group has been used extensively in many classical recipes throughout history.



REFERENCES

- Goren-Inbar N, Sharon G, Melamed Y, Kislev M. Nuts, nut cracking, and pitted stones at Gesher Benot Ya'aqov. *Proc Natl Acad Sci* 2002;99:2455-60
- Gil L. Las transformaciones históricas del paisaje: la permanencia y la extinción local del pino piñonero. Los montes y su historia: Una perspectiva política, económica y social. Huelva: Universidad de Huelva; 1999
- Mithen S, Nyree F, Carruthers W, Carter S, Ashmore P. Plant use in the Mesolithic: Evidence from Staosnaig, Isle of Colonsay, Scotland. *Journal of Archaeological Science* 2001;28:223-34
- Whitehouse WE. The pistachio nut: A new crop for the western United States. *Econ Bot* 1957;11:281-321
- Draine B, Hiden M. *The Walnut Cookbook*. Berkeley: Ten Speed Press; 1998
- Zohary D, Hopf M. *Domestication of plants in the old world: the origin and spread of cultivated plants in West Asia, Europe, and the Nile Valley*. Oxford: Oxford University Press; 2000
- Ghalioungui P. *La Médecine des pharaons: Magie et science médicale dans l'Égypte ancienne. Les Enigmes de l'univers*. Paris: Robert Laffont; 1983
- García Soler MJ. *El arte de comer en la Antigua Grecia*. Madrid: Editorial Biblioteca Nueva; 2001
- Hippocrates. *The sacred disease*. Jones WHS, translation Hippocrates works (vol II), p. 337. Cambridge, MA: Harvard University Press; 1967
- Diocles, fr. 126 Wellman, Filotimo, Dífilo y Mnesíteo, fr. 30 Bertier, en *Ath.* II 53e-f y 54b
- Pedacio DA. *Acercas de la materia medicinal y de los venenos mortíferos*. Translation Ade Laguna. Madrid: Comunidad de Madrid, Secretaría General Técnica; 1991
- Bonifacio P. *Il pistaccio; coltivazione, commercio, uso*. Rome: Ramo editoriale degli agricoltori; 1942
- Plutarch. *De Isid.*; *Tibull.* lib. i. eleg. vii. 29
- Strutt, *Manners and Customs, &c.*, vol. i. p.32, fig. vii
- Van der Veen M. High living in Rome's distant quarries. *British Archaeology* 1997;28:6-7
- Apici. *L'art de la cuina*. Traducción JG Pallarés. Barcelona: Fundació Bernat Metge; 1990
- Pliny the Elder, John B, Riley HT. *The Natural History*, pp. 23-75 [GR Crane, chief editor]. London: Taylor and Francis; 1855
- Ibn Wafid. *Kitab al-adwiya al-mufrada (Libro de los medicamentos simples)*. Edition and translation LEA de Cárcer. Madrid: Consejo Superior de Investigaciones Científicas y Agencia Española de Cooperación Internacional; 1995
- Averroes. *El libro de las generalidades de la medicina*. Edition and translation MCVde Benito, CA Morales. Madrid: Editorial Trotta; 2003
- Cruz J. *Dietética medieval: Apéndice con la versión castellana del "Régimen de salud" de Arnaldo de Vilanova*. Huesca: La Val de Onsera; 1997
- Cruz J. *La cocina mediterránea en el inicio del Renacimiento* Martino da Como "Libro de arte culinaria". Ruperto de Nola "Libro de guisados". Huesca: La Val de Onsera; 1997