

Usage of date (*Phoenix dactylifera* L.) seeds in human health and animal feed

Abstract

This chapter outlines the applications of date seeds to health promotion and disease prevention. Epidemiological studies have consistently shown that high fruit and vegetable consumption is associated with a reduced risk of several chronic diseases, such as coronary heart disease, cardiovascular disease, cancers, atherosclerosis, neurodegenerative diseases (such as Parkinson and Alzheimer), and inflammation, as well as aging. This is attributed to the fact that these foods may provide an optimal mixture of phytochemicals such as dietary fiber; natural antioxidants such as vitamins C, E, and beta-carotene; and phenolic compounds. Date seed protein contains the majority of essential amino acids. Date seeds are a very rich source of dietary fiber, phenolics, and antioxidants that makes them a good ingredient for functional foods. Phenolic compounds of fruit seeds, such as phenolic acids and flavonoids, have been shown to possess many beneficial effects, including antioxidant, anticarcinogenic, antimicrobial, antimutagenic, and anti-inflammatory activities and the reduction of cardiovascular disease. The advantages of incorporating date seeds into the animal diet include increased weight gain, improved feed efficiency, and improved meat palatability. A few studies have reported allergy or hypersensitivity to date palm fruit and pollen. The high concentration of selenium detected in some date varieties, which is related to the selenium content of the soil, also gives some cause for concern.