**High plant density for more roots in Asparagus**

*Asparagus racemosus* Willd and *A. ascvendens* Roxb. are well known for their medicinal properties. For commercial cultivation and production of more roots which are the drug source, agrotechnical studies have been done by Central Institute of Medicinal and Aromatic Plants, Lucknow. The experiments revealed that for obtaining high root yield these two species should be grown at the high plant density of $1.11 \times 10^5$ plants/ha in sandy loam soils (Muni Ram et al, *J Med Arom Plant Sci*, 2001, 23, 75-76).

**Technique to grow wild medicinal plant, Atibala**

*Abutilon indicum* (Linn.) Sweet, (Hindi- Atibala or Kanghi) is a common weed having many medicinal properties. For commercial cultivation removal of hard seededness of its seeds is essential. Amongst various treatments given to reduce seed dormancy, hot water treatment at 70°C for 10 minutes followed by concentrated sulphuric acid scarification for 5 minutes was found to be most effective for breaking dormancy due to hard seed coat (Gupta et al, *J Med Arom Plant Sci*, 2001, 23, 369-371).

**Beverage**

*Colocynth or Bitter Apple, Indrayan, Citrullus colocynthis* (Linn.) Schrad. syn *Colocynthis vulgaris* Schrad. is most abundantly found in north-western plains of India, especially in the Barmer, Bikaner, Jaisalmer and Jodhpur districts of Rajasthan and various parts of Gujarat. The plant has found a place in the seed oil industry, food and medicine.

The seeds are considered an alternative to soybeans for milk preparations. The extract from seeds has 3.6% protein, 4.0% fat and 2.5% carbohydrates, which are comparable to those of soymilk. An inexpensive substitute for milk has been prepared from its seeds in Nigeria as the plants are grown widely in that country and other parts of West Africa.

Akubor and others at Department of Food Science and Technology, Federal Polytechnic, Nigeria studied the influence of storage on chemical, microbial and consumer acceptability of the milk-like product made from the seeds. The studies carried on bottled seed milk showed that it will store well for one day at 30 ± 2 °C and three days at 10 ± 2 °C, hence it is recommended that it should be consumed within 24 h of production. The milk was rated good for taste, flavour and overall acceptability and very good for colour. Process of making the milk has also been discussed in the paper (Akubor et al, *Plant Foods Hum Nutr*, 2002, 57, 191-196).
Recently, the physiological effects of polyphenol-rich foods, such as fruits, vegetables, and beverages including fruit juices, wine, tea, coffee, and chocolate, have been receiving a lot of attention as dietary sources of antioxidants that are valuable for human health. Many epidemiological studies have strongly suggested there is a correlation between intake of polyphenol-rich foods and low mortality due to coronary heart disease (CHD). CHD, such as myocardial infarction and ischemic stroke, which is closely related to atherosclerosis, is a major cause of death in advanced countries. Therefore, it is worth studying the impact of the daily consumption of polyphenol-rich foods and the extent of the effects of such foods on atherosclerosis.

Oxidative damage is an important etiologic factor in atherosclerosis. According to the oxidative stress theory, oxidative modification of low-density lipoprotein (LDL) is thought to play a key role in the development of atherosclerosis. Therefore, inhibiting this process is considered to be an important therapeutic approach. Indeed, vitamin E and probucol have been reported to prevent LDL oxidation and delay the development of atherosclerotic plaques in the animal models, suggesting the effectiveness of antioxidants for the treatment and prevention of atherosclerosis.

Green tea is a widely consumed beverage, which mainly contains low molecular weight polyphenols belonging to the flavan-3-ol class of flavonoids. In animal experiments, green tea polyphenol was demonstrated to reduce serum cholesterol levels, the elevation of which is one of the risk factors for atherosclerosis. Furthermore, green tea polyphenol is known to be an excellent antioxidant that directly scavenges free radicals and inhibits lipid peroxide formation. Green tea, owing to its antioxidative activity, has also been reported to inhibit hypertension, mutagenesis, and tumorigenesis and to protect against renal diseases in several experimental systems in in vitro and in vivo.

Yokozawa and others from Japan investigated the effects of green tea polyphenol on the serum antioxidative activity and cholesterol levels of cholesterol-fed rats and compared them with those of probucol, a hypcholesterolemic agent. To evaluate the antioxidative activity, the susceptibility to oxidative modification of low-density lipoprotein (LDL) isolated from the serum of cholesterol-fed rats was measured, as was the serum antioxidative activity using the spontaneous autoxidation system of brain homogenate. Administration of green tea polyphenol effectively inhibited LDL oxidation and elevated serum antioxidative activity to the same degree as probucol. However, higher amounts of polyphenol than probucol needed to be administered to reduce the total, free, and LDL cholesterol levels. Furthermore, green tea polyphenol increased the levels of high-density lipoprotein (HDL) cholesterol, leading to dose-dependent improvement of the atherogenic index, an effect that was not seen with probucol. Thus, green tea polyphenol may exert an anti-atherosclerotic action by virtue of its antioxidant properties and by increasing HDL cholesterol levels (Yokozawa et al, J Agric Food Chem, 2002, 50, 3549-3552).

**Bottled Tea**

The bottled tea drink market has exploded in recent years. Tea beverages, with their low-calorie, low-fat and low-sugar content, are considered both healthy and thirst-quenching. US-based Coca-Cola Company introduced Lanfeng honey green tea and then offered a whole range of tea products such as oolong tea, jasmine tea and ice lemonade tea. However, studies indicate that bottled tea drinks aren’t a substitute for brewed tea. It all comes down to polyphenols - powerful anti-oxidants (http://chinesefood.about.com/library/weekly/aa051602a.htm; http://ce.coi.gov.cn/enew/new_fl/fd00fg79.htm).