

Ginseng : The Root of Life

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GINSENG (Rencong in Chinese) is a perennial herbaceous medicinal plant of the family Araliaceae. It seems that as if nature itself wanted to draw man's attention to this miraculous plant by shaping its root like a human body. That was how it received its name, ginseng, the Chinese for 'manroot'. But then, in the East it is also called 'the root of life'. Some 5000 years ago Tibetan healers knew that ginseng's health-giving juice could put back on his feet a patient drained of strength by illness, that it would invigorate the tired wayfarer and add year to the lives of the aged. Ancient healing manuals give prescriptions for medicines which allegedly cure senile decay and make the body and soul youthful. And who, in old age, would refuse such a medicine? People did not grudge money to but this all powerful remedy.

Ginseng as always been as precious as gold. One of the reasons being that it is rather rare. In fact it is as if it were hiding from the human eye in the depths of the taiga. The solitary ginseng seeker will set out in search of the plant when its purple berries ripen in August and September. Whoever finds three or four roots a season is indeed lucky. Ginseng's (Panax schinseng CA. May) roots is reputed to be a panacea for cancer, rheumatism, diabetes, sexual debility, and aging. The generic name Panax is derived from Greek words meaning 'panacea' and from time immemorial the Chinese have considered ginseng a cure for most 'ills and infirmities. Ginseng has soothing properties; but the continued Asian demand, particularly for roots resembling the form of a man, may be because of the popular Chinese belief that ginseng is an aphrodisiac.

The claim for ginseng date back to ancient China, and for centuries the root was of great value there. Europe did not hear of it, however, until 1642, when the explorer Alvaro

Samedo returned with a report of the restorative properties of oriental ginseng (later named Panax ginseng) which he reported was being sold for twice its weight in silver. In 1713, Emile Jartoux, a Jesuit cartographer working in northern China, reported ginseng's effectiveness and power among the Chinese. His fellow Jesuit, Joseph Francois Lafiteau, read the report in Quebec, and after a diligent search found (1718) in the woods near his mission an almost identical species, Panax quinquefolius, wild American ginseng. Demand for the American root grew in China and many colonists and settlers, including Daniel Boone, hunted it avidly. Millions of pounds were uprooted, dried and exported in the China trade. Eventually the slow-maturing plant, native to cool woods from Quebec to Oklahoma, was almost extinct. Cultivation began in the late 19th century (since about 1870) and in Korea since at least the early years of the century. Wild ginseng root was exported from America to the orient in the early 1700's.

In 1978, 180 tons of ginseng was harvested in the USA, 95 per cent of which was exported to Hongkong. Today China and Korea export ginseng to the west, where its popularity has grown in recent years. Soviet Scientists claim to have found substances in ginseng that stimulate endocrine secretions and act as a tonic to the cardiovascular system. Medical research in the west, however, has so far failed to substantiate these claims.

Ancient Oriental medicine slightly exaggerates ginseng's curative properties. Modern research has shown that the medicinally used extraction of this root does have many valu-

able properties. It increases the human capacity for mental and physical work, relieves stressful states, exercises a tonic effect in the case of weakness, raises the blood pressure, and intensifies the body's defence reaction to infectious diseases. However, being a strong stimulant in some cases it poses a grave threat. For instance, it may spur on any inflammatory process and tumour growth, complicate a peptic ulcer, or cause a hypertensive crisis.

Asiatic ginseng (Panax ginseng) is native to temperate eastern Asia. The root and rhizome of ginseng are perennial wintering organs. The root is rodlike, weakly branched, fleshy and whitish gray or yellowish. The stem is straight, approximately 50 cm high, in most cases single, with a verticil or its supper part (a top rosette) of three to five leaves (rarely more). The leaves have long petioles and are palmately compound, with five or seven leaflets with sharply serrated edges. A scape with a simple umbel of 15-20 (average) small, greenish white monococious flowers with a faint aroma rises from the centre of the leaf rosette. The fruit is a bright red two (more rarely one or three) seeded drupe. Ginseng flowers in July and the fruit ripen in August.

Wild ginseng is a rare, relict plant. It is found in the USSR in the Primorie and Khavrovsky Krai, in the north east portions of China, and in northern Korea. It grows mainly in virgin broad leaved coniferous forests. It prefers loamy, well-drained soils rich in humus. Wild ginseng grows and develops very slowly; its maximum age is around 100 years, sometimes more. The root grows slowly, increasing in weight by just a

few grammes a year. It can be dug out for use only in the seventh or eighth summer but it is best to wait until the tenth or even the fifteenth, by which time it has gained in vigour. The older the ginseng, the more efficacious its curative properties. And, most importantly, an old root weighs not 25 to 30 grammes, but almost

300 grammes. Rare specimens weigh even 400 and as many as 800 grammes. Such root will be at least 50 years old. Preparations of the root in the form of an alcoholic infusion, powders or tablets are used as tonic in hypotonia, fatigue, exhaustion, and neurasthenia.

Ginseng is cultivated in the



USSR since 1930. It is cultivated on experimental plantations, and not only in the Soviet Far East, its customary area, but also in Siberia, around Moscow, in the Caucasian mountains, and in the Ukraine. Under cultivation ginseng develops faster, yields a larger root and begins to fruit in its fourth year (while wild ginseng fruits only in its 15th or even 20th year), and is equivalent to the wild from in Chemical Composition and pharmacological effect.

But growing the root of life is a complex labour consuming business and its cost price remained high until scientists helped to make this curative plant more accessible and cheaper. In the early 1960's the Institute of Plant Physiology & All union Institute of medicinal plants of the USSR Academy of Sciences, for the first time in the world employing the genetic method, obtained cell cultures of ginseng capable of growing and rapidly increasing its mass on special nutrient media. A process for the industrial cultivation of such a bio mass was developed. As a result of intensified cell division its original mass increases 15- to 20-fold in 40 to 45 days. Analyses of the ginseng biomass have shown that one gramme of its exercises curative effect equal to 36 conventional units (one gramme of a preparation obtained from this natural root is rated at 67 units). Its Chemical Composition is such: Saponin and its compound Panaxozoid, Etheral Volatile oil (panacinon), Vitamin B 1, B2, Phytosterol, Resin, Starch, Fat, Iron, Manganese and some other substances (panaxin, panacuquin and schingentin).

Ginseng is cultivated in beds laid from east to west and shaded from the sun by lean-to Sheds. Leaf humus or peat-

moss, potassium salt, superphosphate, and for better aeration, granite gravel (crushed granite) are added to the soil. Most Ginseng gardens are small. Nearly all labour is by hand. Ginseng is sown in early spring in seed beds, in the fall, when they have finished vegetating, the plants are transplanted to permanent places in beds prepared as for the seeds. The feeding area for the plants must be no less than 20 X 25 cm. Care of ginseng planting requires systematic weeding, cultivating, and hilling and control of pests and diseases. In dry hot weather the plant need irrigation. The roots are harvested at the end of the growing period at the age of five to eight years. Seeds are gathered after the third to fourth year of life of the plant. The ripe mass is dried, ground to a powder and then its extract and biologically active substances are obtained. These are used not only in medicine but also in cosmetics for making skin foods and medicinal shampoos.

The ginseng grew dozens of times faster in the Russian space station than it did on Earth. Other species most closely related to ginseng that belong to the genus Panax and have medical significance are five leaved, or American ginseng (Panax quinquefolium Linnaeus), cultivated in the USA and Canada, Panax Pseudoginseng wall, cultivated in Southern China and the Vietnam, and wild Japanese, or climbing, ginseng (P. Japonicus C A May). A complete substitute for ginseng has been discovered the Far Eastern thorny, eleutherocecal Shrub Eleutherocecus maxim, Echinopanax elatum Nakia, Radix Araliae mandshuricae.

American ginseng (P. quinquefolius) occurs from Maine to Minnesota and southward to northern Florida and Oklahoma. Both species formerly were relatively abundant in shady, well - drained sites in hardwood forests throughout much of their range. Extensive collecting of the wild plants has greatly reduced their

numbers. A related plant, the dwarf ginseng (P. trifolius), is found from Novascotia to Wisconsin and Georgia.

Wild American ginseng plants are 8 to 20 inches (20-50 cm) tall and bear several leaves, each usually having 5 leaflets. A Cluster of small greenish yellow flowers is produced in June or July, and bright red, 1 to 3 seeded berries develop later in the summer. The mature, fleshy, spindle shaped root is 2 to 4 inches (5-10 cm) long and 1 inch (2.5 cm) or more thick. Older roots are commonly forked. Ginseng roots are slightly aromatic and have a sweetish, somewhat bitter taste.

Ginseng roots have been exported from the United States since the 18th century. The earliest exports were sent to China via France or England. The first direct shipment to China was made by John Jacob Astor in 1782. Today, roots exported from the United States, Japan and Korea are shipped mainly to Hongkong for reexport to areas of south-eastern Asia having substantial Chinese populations. Only about 600 acres (240 hectares) are planted to ginseng in the USA. Wisconsin is the principal producer. The per acre yield averages about 1,120 kg, and the yearly harvest about 45,000 kgs. The roots are usually harvested six years after the seeds are planted.

The grading of ginseng roots is highly subjective practice. May Criteria are used, such as source, shape, color, taste, texture, and markings. The trend has been toward increasingly higher prices (5-10 per cent per year). In the early 1970's wild ginseng root sold for \$ 50 per pound (\$ 110 per kilo). Cultivated root, which is considered inferior to the best wild ginseng, sold for about \$ 50 per kilo.

It would be useful for us if somebody in Bangladesh (genuine plant lover) starts cultivating of this wonderful medicinal plant, the root of life. After all, we need a reliable medicine and effective biostimulator like ginseng for our better health.

Metropolitan

Mortality falls in Bangladesh

Deficiency of micronutrients in food threatens child survival

Deficiency of essential micronutrients in food combined with protein energy malnutrition (PEM) of the under-aged children in the developing countries is causing greater risk of their growth and survival, reports BSS.

This was stated in a paper presented at the three-day annual scientific conference of International Center for Diarrhoeal Disease Research, Bangladesh (ICDDR,B) which began at the Bangladesh College of Physicians and Surgeons auditorium at Mahakhali in Dhaka on Saturday.

Associate Director of ICDDR,B Dr Dilip Mahalanabis in his paper on 'role of micronutrients in growth and child survival' said adequate dietary intake of these micronutrients was one potential tool to improve child survival status and their growth in the developing countries.

He said the commonly deficient micronutrients in these countries including Bangladesh were vitamins : Vitamin 'A' folic acid and pyridoxine and minerals : zinc, iron, copper, iodine and selenium.

The conference was inaugurated by Health and Family Welfare Minister Chaudhury

Kamal Ibne Yusuf as the chief guest. Health Secretary M Mokammel Haque was the special guest. ICDDR,B Director Demissie Habte, MD, also spoke. ICDDR,B Trustee Board Member and Economic Relations Division Secretary Enam Ahmed Chaudhury presided over the inaugural session.

More than 200 delegates representing different organisations are participating in the conference.

Dr Mahalanabis said a recent study in Bangladesh showed reduced morbidity and mortality and increased subsequent linear growth among more malnourished children when zinc was supplemented during diarrhoea and Vitamin A supplementation has shown greater reduction in mortality.

Copper deficiency causes anaemia, depression of immune defence system leading to increased susceptibility to infection, he added.

He said the deficiency of Vitamin 'A' could be met by increasing yellow, green, and red fruits and vegetables as well as small fishes in the diet.

A number of research papers were presented on Saturday on different aspects

of maternal child health (MCH) and nutrition.

A heated debate ensued when the remarks by paediatrician Prof M Q K Talukder that most of our mothers discard the colostrum containing breast milk during the few days after childbirth out of ignorance were contested by Prof Sadeka Tahera Khanum. She said that careful observations had proved that the mothers throw only a few drops of the breast milk and not the whole.

Prof Talukder criticised different medical institutes including the ICDDR,B for issuing discharge certificates to different brand of child food and said these were inadequate and wrong practice.

In his inaugural speech the Health Minister lauded the role of ICDDR,B in controlling the diarrhoeal diseases in the developing countries and sought support of ICDDR,B in implementation of the forth-coming four-year health programme of the Government.

He appreciated the role of the donor community in supporting the programmes of the centre and requested their continued support in future.

Call to design proper policy on retrenchment

By Staff Correspondent

Speakers at a seminar on strategic personnel management stressed the need for designing appropriate retrenchment procedure for developing an efficient management system.

The seminar organised by Bangladesh Management Development Centre (BMDC) in collaboration with the Consultative Committee of Public Enterprises (CONCOPE) on Saturday, was attended by Dr Ekram Hossain, Secretary, Ministry of Industry as chief guest, while Monzur-ul Karim, Secretary, Roads and Road Transport Division presided.

The seminar was attended by top level management officials of public and private sectors.

Commits suicide

By Staff Correspondent

Shaheen Sultana (23) allegedly committed suicide by hanging herself with a rope from a ceiling fan rod at around 4:30 am in House No 10/11, Section-10/C in Mirpur.

An unnatural death case was registered with Mirpur Police and the body was sent to DMCI for autopsy.



A six-member teachers delegation led by BUET Vice-Chancellor Prof Mohammad Shahjahan called on President Abdur Rahman Biswas at Bangabhaban on Saturday. — Star photo

Dhaka-Bangkok ties to grow

The Ambassador-designate of Thailand, Vichai Vannasin, Saturday presented his credentials to President Abdur Rahman Biswas at Bangabhaban, reports BSS.

Accepting the credentials, the President hoped that there was scopes of extending bilateral relations, particularly in economic fields, between Bangladesh and Thailand.

He said being a close neighbour Bangladesh watched with great satisfaction and pride the progress by the friendly people of Thailand over the years. He said there were potentials for increasing trade ties for mutual benefits of the two peoples.

'Fazlul Huq was committed to democracy'

President Abdur Rahman Biswas Saturday urged the people to be inspired by the selfless dedication, spirit of patriots and services which the late great leader Sher-e-Bangla A K Fazlul Huq had followed in his life, reports BSS.

In a message on the occasion of Sher-e-Bangla's 118th birth day, President Biswas paid his tribute to the great leader, who, he said, would always be remembered for his uncompromising attitude for the causes of the people and the nation.

The President termed late Sher-e-Bangla as an efficient lawyer, political thinker, prolific orator and a devoted social reformer, who made himself a legend in the sub-continent even during his lifetime. He also recalled with grati-

President Biswas hoped that during his tenure as ambassador the relations of Bangladesh with Thailand would be widened and strengthened. He also assured all cooperation to the new envoy in discharging his duties here.

Reciprocating, the ambassador hoped that during his tenure he would devote his energy to promote friendship and building deeper relations between the two countries.

Earlier, Ambassador Vannasin was given a guard of honour by a smartly turned out contingent of the President's Guards Regiment.

tude Fazlul Huq's contributions in spreading education, fight against social injustices and commitment towards democratic values and more specifically to the down-trodden.

He said Sher-e-Bangla was also a tested friend of the peasants. He rendered his selfless services to the down-trodden from in or outside power.

He hoped the people to follow his ideals and prayed for the departed soul.

Stands first in degree exams

By DU Correspondent

Firoza Yasmin, a student of Badrunnessa Girls College stood first in the B.A. (pass and subsidiary) examination of 1990 with a first class.

She is the second daughter of Sakhawat Hossain of Makin Katra in the city.

Widows outnumber widowers

Widows outnumber widowers in the country.

In Bangladesh, there is a much higher proportion of widows than widowers at all ages, according to ICDDR, B annual report, reports UNB.

Mortality differentials, in which a woman outlives her husband because of age difference at marriage, alone do not explain the puzzle.

It was possible that remarriage by a widower further reduced the number of widowers in the country's population, the 1990 Annual Report of ICDDR, B suggested.

By age 60, about six per cent of the country's males are widowers while at the same age more than 60 per cent of females are widows, the ICDDR, B wound up its brief report without quoting any further demographic data.

Jubo Dal founding day today

The founding anniversary of Jatiyatabadi Jubo Dal will be observed countrywide today, reports BSS.

In Dhaka, the programmes marking the day includes placing of wreaths at the Mazar of Shaheed President Ziaur Rahman, Mlad Mahfil and discussion meeting at the mazar premises at 9.30 am.

Mirza Abbas MP, Mayor of Dhaka City Corporation and President of Jatiyatabadi Jubo Dal, and Goychshwar Roy, State Minister for Environment and Forest and Secretary General of Jubo Dal, have requested the party workers to attend the programmes in Dhaka and observe the day throughout the country in a befitting manner.

Zia Foundation to be set up

'Ziaur Rahman Foundation' will be formed for research and creating awareness among the people about late President Ziaur Rahman and his Bangladeshi nationalism, reports BSS.

This decision was taken at a meeting held at Dhaka University TSC premises, presided over by Mr M A Barnik.

Mr Sadeq Sabuj has been made the Convener of the nine-member Convening Committee for the formation of the Foundation, a Press release said.

The meeting discussed different aspects of the life of President Zia and the 'Bangladeshi nationalism conceived by him and stressed the need for setting up a Zia foundation for the purpose of spreading this concept to the people.

The objectives of the Foundation include collection and preservation of the documents on different chapters of President Zia's life, formulation of a distinct guidelines on Bangladeshi nationalism, and steps to spread Zia's ideals at different levels.

Other members of the Convening Committee are Mr M A Barnik, A K M Hamidul Huq Khan, Shah Alam, S M Kamal Hossain, Abul Kalam Shamsuddin, Mahbubur Rahman, Zahurul Huq and Abu Saeed Mohammad Faruq, the Press release added.

Sweden to give aid for cyclone hit educational institutions

Swedish government is willing to provide assistance for reconstruction of cyclone-affected educational institutions in the coastal areas and implementation of mass education and compulsory primary education programmes, reports BSS.

This was stated by Swedish Ambassador to Bangladesh, Carl Olof Cederblad, at a meeting with Education Minister Jamiruddin Sircar at the latter's office in Dhaka Saturday.

The Education Minister informed the Swedish Envoy that the present democratic government will undertake a massive programme for eradicating illiteracy by the year 2000. He also sought increased Swedish assistance in implementation of compulsory primary education programme which will commence from January, 1992 throughout the country.



Health and Family Welfare Minister Chaudhury Kamal Ibne Yusuf addressing the annual scientific conference of ICDDR,B at the auditorium of Bangladesh College of Physicians and Surgeons at Mahakhali on Saturday

Army relief activities continue

Army personnel from the Bogra and Rangpur areas have continued their relief activities at the flood-affected northern districts, an ISPR press release said in Dhaka Saturday, reports BSS.

They assisted the local administration in distributing more than 2,532 tons of relief goods including rice and wheat at different places of Rajshahi, Bogra, Naogaon, Nawabganj, Natore, Pabna, Sirajganj, Rangpur.

CMC classes resume Nov 2

CHITTAGONG, Oct 26 : Classes of Chittagong Medical College will resume on November 2, reports BSS.

This was decided at an extended meeting of the academic council, held at the college conference room Saturday.

Representatives of all teachers, students' union and leaders of student fronts were present in the meeting.

According to a press release of the college, the residential

hostels will also be opened at 8 am on October 31.

Students will have to show their identity cards before entering hostels.

Raising of slogans, taking out processions and holding of rallies and political meetings within the medical college, hospital and hostels will be banned till November 8.

The college authorities sought cooperation of all concerned in maintaining a congenial academic atmosphere on the campus.

Plea to provide medicare for flood victims

Dr Aleem Al Razec Memorial Council urged the government to intensify relief efforts and provide quick medicare facilities in the flood-hit and diarrhoea affected districts of the country, reports UNB.

In a statement Saturday Chief Patron of the Council Amanullah Khan expressed his shock and dismay at the colossal loss of lives and devastating causes to property and crops.