

## **Role of Medicinal Plants on National Economy**

Since ancient times, mankind all over the world mainly depended upon plant kingdom to meet all their needs of medicines: for alleviating ailments, search for eternal (existing or lasting) health, longevity and to seek remedy to relieve pain and discomfort, fragrance, favours and foods. It had prompted the early man to explore his immediate natural surrounding and try many plant, animal products, mineral and develop a variety of therapeutic agents.

Medicinal plants still play an important role in emerging and developing countries of Asia, both in preventive and curative treatments, despite advances in modern Western medicine. They also generate income to the people of many Asian countries, who earn their livelihood from selling collected materials from the forest or by cultivating on their farms. Thus, the medicinal plants constitute a very important national resource. People in India and China are known to have used plants in organized health care regime for over 5,000 years. The ancient civilization of India developed their own systems of medicine which were predominantly plant based. People from other countries of the world as China, Cambodia, Indonesia and Baghdad used to come to the ancient universities of India, like Takshila (700 B.C.) and Nalanda (500 B.C.) to learn health sciences of India particularly ayurveda. From history, we learn that since ancient times, plants remained major natural resource in the world.

The *Rig Veda* (4500–4600 B.C.) mentioned the use of medicinal plants for the treatment of one or other disease. There are reports available about the local communities having a long history of dependence on traditional remedies, largely based on plants, for immediate access to relatively safe, cost-effective, efficacious and culturally acceptable solutions to primary health care.

The World Health Organization (WHO) estimated that 80% of the population of developing countries relies on traditional medicines, mostly plant drugs for their primary health care needs. Even the modern pharmacopoeia still contains at least 25% drugs derived from plants and many others, which are semisynthetic, built on prototype compounds isolated from plants. Medicinal plants are the major components of all indigenous or alternative systems of medicine (ayurveda, homoeopathy and naturopathy). Demand for herbal drugs is increasing throughout the world due to growing recognition of natural plant-based products, being nontoxic, having no side effects, easily available at affordable prices and some-times the only source of health care available to the poor. Hence, medicinal plant sector has traditionally occupied an important position in the

socio-cultural, spiritual, economic values of rural and tribal lives of both developing and developed countries. Millions of rural households are using medicinal plants in self-help mode.

About 90% of medicinal plants used by the industries are collected from the wild source. The other main source of medicinal plants is from cultivation. The cultivated material is definitely more appropriate for use in the production of drugs. The standardization of pure products, extracts or crude drugs, is critical and becomes easier.

International trade in medicinal plants both within South Asian countries and East Asia, Europe and North America is growing in economic importance, e.g. Nepal is earning an estimated US\$ 8.6 million annually from the export of medicinal plants; thus, the medicinal plants and other forest products influence local, national and international economics.

There is widespread belief that 'green' drugs are healthier than synthetic product. Recent reports have witnessed an upsurge in the popularity of herbal medicines. In most industrialized countries, use of medicinal plants has increased dramatically in the last decade. There has been a rising trend in *Ayurvedic* (herbal) product in India. But it is not only in the last decade that the country has truly seen the commercialization on the herbal concept. Herbal has now become full-fledged wave composing of both in beauty care and health care products. As well as herbal over-the-counter (OTC) (ordinary retail purchase, with no need for a prescription or licence) drugs have gained substantial ground. Currently, according to industry estimate, total pharmaceutical market is around Rs. 5,000 crore; the total herbal market share is Rs. 1,200 crore, of which the OTC market constitutes around Rs. 400 crore.

In India, plants have been traditionally used for human and veterinary health care and also, in the food and textile industry. Ninety percent of the local food resources known to indigenous people were undocumented to nutritional literature, trade, cosmetics and perfumes; but India has a special position in area of herbal medicines, since it is one of the few countries which are capable of cultivating most of the important plants used both in modern and traditional systems of medicine. This is because India has vast area with wide variation in climate, soil, altitude/latitude and rich flora.

The herbal drug market itself is growing at a rate of between 20% and 30% annually. The healthy growth rate of this market can also be attributed to the government policy of encouraging the manufacturers of purely herbal products.

### **Export potential**

The domestic market about US\$ 1 billion of Ayurvedic medicine is opening up to the herbal phenomenon; the export market is also showing promise. Many pharmaceutical companies are targeting export of herbal products. World trade in plant medicines is of billions of dollar. In 1994, China exported US\$ 5 billion of plant drugs; Germany imported about US\$ 105 millions of plant drugs. The number of medicinal plants trade too is astonishing. Now Germany export market is about Rs. 600 crore, and is expected to expand to Rs. 20,000 crore in the next decade. The present export volume of crude drugs from India stands at 36,200 tonnes valued around US\$ 24 millions. China and India are two great producers of medicinal plants having more than 40% of global diversity.

In developing countries, plants are the main source of alternative medicine. According to the WHO, as many as 80% of the world's people rely on traditional medicines for their primary health care, most types of which use remedies from plants. The use of traditional medicine in developing countries is increasing because population is increasing. Government wants to encourage indigenous forms of medicine rather than to rely on imported drugs, and there are strong moves to revive traditional cultures; being easy access and cost effectiveness ultimately affect the national economy.

In South Africa, at national level, 20,000 tonnes of medicinal plant materials are traded, corresponding to a value of about US\$ 60 millions. In Zambia, trade in traditional medicine is worth over US\$ 43 millions per annum. Traditional systems of medicine are also predominant medical systems in practice in Malawian rural areas.

Medicinal plants based medicine also has significant role in most Latin American countries. About 70–80% of the Latin American population relies on traditional medicines for their health care needs. For example, about 80% of Ecuadorians rely on medicinal plants or products derived

from plants. There is lack of access to modern drugs in a significant part of Latin America. In India, annual turnover of herbal industry was estimated around US\$ 250 million in 1995. According to Chemexcil report, export value of Ayurvedic and Unani medicine was about US\$ 41.6 million during 1999–2000; the major OTC products contribute around US\$ 30.5 million.