

Address By Smt. D. Purandeswari MoS(HRD-HE)
At The Dedication Ceremony Of The
Biju Patnaik Medicinal Plants Garden & Research Centre In Koraput,
Orissa
On 14th April, 2007 At 11.00 Am.

Hon'ble Shri Naveen Patnaik Ji Chief Minister of Orissa,
respected Dr. M.S. Swaminathan Ji and other distinguished guests
and friends.

I deem it a great honour and privilege to be here this morning
and to participate in this dedication ceremony of The Biju Patnaik
Medicinal Plants Garden & Research Centre. Whenever there is an
opportunity to attend some seminar, conference, or ceremony with
which respected Swaminathanji is even remotely associated, I
seldom miss it for such his reputation as an authority in the field of
agriculture, biodiversity or other core areas of development and
growth.

India as you are all aware is a mega biodiversity nation.
Occupying only about two per cent of the total land, India supports
about eight per cent of the earth's biodiversity and possesses all
known types of ecological, and agro climatic conditions.
Biogeographically, India is positioned in a way that all types of
ecosystems exist here, resulting in one of the richest centres of plant
genetic resources. This rich biodiversity is reflected in medicinal
plants too. As per estimates India has about 15000 species of plants
with medicinal properties.

These plants have made a good contribution to the development of ancient Indian materia medica. One of the earliest treatises on Indian medicine, the Charak Samhita(1000 B.C),records the use of over 340 drugs of vegetable origin. Most of these continue to be gathered from wild plants to meet the demand of the medical profession. Thus, despite the rich heritage of knowledge on the use of plant drugs, little attention had been paid to grow them as field crops in the country till the latter part of the nineteenth century.

Tradition of medicinal plants use in India is about 4000 years old. Even today millions of people across the country depend on this tradition, which includes two streams – the codified system and the folk system. Folk system is practiced by ethnic communities all over the country. It has been transferred orally from generation to generation. The codified systems include Ayurveda, Siddha, Unani and Tibetan. Plants have formed an inseparable component of all these systems of medicine, for cure of ailments, freedom from illness and for a healthy life.

If we look at the Ayurveda, about 1400 plants are documented in various texts. In Charaka Samhita, Sushruta Samhita and Ashtang Hridaya we can find more than 600 plants. Rig Veda (4500 to about 1600 BC) is perhaps the oldest document where plants have been described. Atharva Veda, which is a subsequent treatise also describes medicinal uses of large number of plants. Another treatise Dravya Guna Shastra provides information about medicinal plants from pharmacological point of view. The Indian systems of treatment lay adequate stress on balanced diet and on inclusion of

specific items in food to provide immunity against diseases as also, number of plants products with medicinal properties from constituents of food. All these systems emphasize on fibres and roughage in food. Now, it is proved that absence of adequate fibers in food causes constipation leading to various problems including cancer. Similarly, vegetables and fruits have been strongly recommended as part of daily diet. Modern research has proved their efficacy as source of vitamins and minerals which can protect against infections and diseases. Even spices have been found to have medicinal properties. For example, capsicum, garlic, turmeric, onion, ginger, black pepper, red chillies, cinnamon and curry leaves have been found to protect against various health problems as well provide cure from certain diseases.

During the past seven or eight decades, there has been a rapid extension of the allopathic system of medical treatment in India. It generated a commercial demand for pharmacopoeial drugs and products in the country, Thus efforts were made to introduce many of these drug plants into Indian agriculture, and studies on the cultivation practices were undertaken for those plants which were found suitable and remunerative for commercial cultivation. In general, agronomic practices for growing poppy, isabgol, senna, cinchona, ipecac, belladonna, ergot and a few others have been developed and there is now localized cultivation of these medicinal plants commercially. The average annual foreign trade in crude drugs and their phytochemicals is between 60 and 80 million rupees and this accounts for a little over 0.5 per cent of the world trade in these commodities.

During the last two decades, the pharmaceutical industry has made massive investments on pharmacological, clinical and chemical researches all over the world in an effort to discover still more potent plant drugs ; in fact, a few new drug plant have successfully passed the tests of commercial screening. However, benefits of this labour would reach the masses only when the corresponding support for agricultural studies for commercial cultivation is provided. In fact, agricultural studies on medicinal plants, by its very nature, demand an equally large investment and higher priority. India, in particular, has a big scope for the development of the pharmaceutical and phytochemical industry. The Indian Pharmacopoeia(1966) recognizes eighty five drug plants whose ingredients are used in various pharmaceutical preparations, whose cultivation deserves priority in our national economy.

The World Health Organization (WHO) has been promoting a campaign for "Saving Plants for Saving Lives". This is because of the growing understanding of the pivotal role medicinal plants play in providing herbal remedies to health maladies. India is home to several important traditional systems of health care like Ayurveda, Siddha and Unani. All these systems depend heavily on herbal products. In addition, allopathic drugs are also derived from a wide range of plant products. Biotechnology has further helped to accelerate progress in bio-prospecting for molecules of value in the preparation of life-sustaining drugs. Several millions of Indian households have been using through the ages nearly 8000 species of medicinal plants for their health care needs. Over one and half million traditional healers use a wide range of medicinal plants for treating

ailments of both humans and livestock across the length and breadth of the country. Over 800 medicinal plant species are currently in use by the Indian herbal industry. However, except for about 120 species, all others are collected from the wild. This collection often involves destructive harvesting when parts like roots, bark, wood, stem and the whole plant (herbs) are used. Unregulated wild harvest, alongside habitat loss and degradation, is leading to resource depletion and which in turn is endangering the very survival of these species. As I have already mentioned earlier, traditional and folklore medicine bequeathed from generation to generation is rich in domestic recipes for common ailments. Traditional medicine encompasses protection and restoration of health over millennia. The best known examples of traditional medicine, differing in concept and protocol, are well developed systems such as acupuncture and ayurvedic treatments that have been widely used to conserve human health in China and India.

Developed countries, in recent times, are turning to the use of traditional medicinal systems that involve the use of herbal drugs and remedies. About 1400 herbal preparations are used widely, according to a recent survey in Member States of the European Union. Herbal preparations are popular and are of significance in primary healthcare in Belgium, France, Germany and the Netherlands. Such popularity of plant-derived products has been traced to their increasing acceptance and use in the cosmetic industry as well as to increase public costs in the daily maintenance of personal health and well-being. Examples of such beauty-oriented therapeutics are skin tissue regenerators, anti-wrinkling agents and anti-age creams. Most

dermaceuticals are derived from algal extracts that are rich in minerals and the vitamin B group. Skincare products such as skin creams, skin tonics, etc. derived from medicinal plants are grouped together as dermaceuticals. Also, amongst the poor, cures and drugs derived from plants constitute the main source of healthcare products.

While countries like Germany, France, Canada, US and China are registering standardized plant extracts of proven clinical efficacy and safety from natural resources as herbal drugs or dietary supplements, despite the fact that India has a vast resource of drugs of natural origin, the country is unable to tap the vast market primarily because it is not having a satisfactory system of quality control and registration of Indian systems of medicines (ISM). However necessary steps are being taken to address this problem at the level of the Government.

It is however, disheartening that despite the increasing use of medicinal plants, their future is being threatened by complacency concerning their conservation.

About 800 to 900 medicinal plants which are in all India trade, about 700 are obtained from the forests and many of these are harvested in large quantities. Common examples are neem, sena, amla, asoka, harra, gulancha, khas, ashwangandha and sarpgandha. Due to excessive and unscientific harvesting, large number of medicinal plant species are under threat. It is quite likely that very soon these plants may become endangered. List of medicinal plants which are under different degrees of threat is quite long. Some of

these are: *Acorus calamus* (Vacha), bael, *Coscinium fenestratum* (Jhar-haldi), *Gloriosa superba* (Karihari), *Janakia aryalpathra* (Amruthapala), champa, pipli, sarpagandha, asoka and arjun. *Plectranthus vettiveroide* (Valak) is a species which is already extinct from the wild.

In order to protect the rich biodiversity of the country and associated knowledge the Biological Diversity Act, was passed in 2002. It provides for a National Biodiversity Authority (NBA), State Biodiversity Boards (SBBs) and Biodiversity Management Committees (BMCs) in local bodies. Foreign nationals / organizations have to obtain prior approval of NBA for using biological resource for commercial use. SBB may restrict the activity and / or associated knowledge. Indian industries have to give prior intimation to the concerned SBB before obtaining any biological resource for commercial use. It is hardly necessary emphasise that the NBA and SBBs have to be proactive in protecting the century's biodiversities.

I understand that the Koraput region of Orissa is globally famous for its rich Biodiversity. More than 1200 medicinal plant species are available in this region. Some of the endemic medicinal plant species in this region are used for curing different diseases. I also learn that the tribal population are poor but their bio-resources endowment is rich and that very little research has been done so far in this area.

In view of this, I welcome the establishment of Biju Patnaik Medicinal Plants Garden Research Centre, in the tribal district of

Koraput and I hope that functioning under the guidance, blessings and patronage of Shri Swaminathanji the centre would undertake intensive and integrated study on medicinal and other aromatic plants which would help to overcome the prevailing dichotomy of the poverty of the people existing alongside the prosperity of the Nature.

Jai Hind.