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Value Added Products from Natural Products Research

Natural products are obtained from higher plants, sponges, higher animals, or even Microorganisms (bacteria, fungus), In the early days, before the last part of 18th century, natural products were the only source of drugs. Value is the perception that a person has of what s/he receives, of whether it will give or produce satisfaction. It is a package, made up of a mixture of tangible and intangible attributes that s/he values, and the business obtains money for its costs which generates benefits that it values. Adding value to natural products has become a very lucrative herbal industry. It is worth over several trillion dollars globally.

In Sri Lanka too the herbal industry a rapidly expanding export sector with an enormous commercial potential. Medicinal plants are being increasingly used in health foods to create a new line of products called nutraceuticals (functional foods). Another line of products known as cosmeceuticals (functional beauty aids) has also emerged, paralleling the trend in functional foods. Sri Lanka, with her unique biodiversity and rich base of traditional knowledge, can easily capitalize on these global trends. Even at present the export earnings from herbal products in Sri Lanka is over Rs. 500 million.

Among the native flora of Sri Lanka, there are well over 500 species used in traditional medicine. Apart from that there are over 900 non-indigenous medicinal plants used in native medicine. Over 10% of all the medicinal plants used in Sri Lanka are endemic to the island and of these, about 80 species are threatened. The populations of medicinal plants are adversely affected by over harvesting and lack of care to their habitat when collecting plants from the wild. Most of the domestic supply of plants is from the wild. This has led to over harvesting of wild populations of such species. In addition, increased demand for agricultural land and unsustainable cultivation practices destroy habitats of medicinal plants.

Sri Lanka is fortunate to have a rich reserve of indigenous knowledge on medicinal plants due to its large number of practitioners of traditional medicine. However, this important source of knowledge is currently under threat as little effort has been made to appreciate and document their knowledge. As a result, the demise of a practitioner signifies a net loss to the pool of this important source of information. Unless a concerted effort is made to record the knowledge of plants used by practitioners of indigenous medicine, it is very likely that vital information on plant uses, their characteristics and even the habitats will be lost.

Sri Lanka is also blessed with a considerable number of well qualified and experienced scientists knowledgeable in the field of natural products. Although research on natural products and allied areas have been conducted for over three decades, attention has not been paid to value addition of the end products of these research studies. It is vital to link with the private sector more robustly to achieve this.

It is also necessary to have a well defined science and technology interface with cultivation and value addition at local level. That will help in conservation of bio-diversity, and reduction in the export of raw materials.

To achieve this it is recommended to :

1. Establish a national task force from private and public sector to oversee the implementation of a national strategy for value addition of natural products.
2. Document in full the national treasury of medicinal plants including databases on the traditional herbal knowledge, trade, and agriculture.
3. Design a national on-site conservation programme linked to a sustainable herbal cultivation strategy.

4. Establish a network of natural products research and training centers of excellence in both the public and private sectors linked collaboratively to international institutions. Product development, clinical evaluation and horticultural research must be priority areas.
5. Develop a comprehensive and integrated investment development and regulatory framework to promote a rapid growth of the herbal industry
6. Establish standards for all level of production research and marketing of natural products.
7. Establish an intellectual property rights framework to protect traditional herbal knowledge and bio-resources.