

The Wealth of India – A Dictionary of Information Resource on Plants, Animals and Minerals

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Introduction

India is an extremely large country with many states that all vary enormously in climate, topography, biological diversity and communities of people. The phenomenal advancement of science and numerous studies have been responsible for the accumulation of vast amount of information about the natural resources of India. Late the first Director General, (1942-1954) of CSIR, Dr Shanti Swarup Bhatnagar, F. R. S. was a patriot with a vision of the country's long-term development in matters of scientific and economic importance of the country. He is the architect of Council of Scientific and Industrial Research (CSIR) and one of the builders of the scientific and industrial edifice of modern India. The *Wealth of India* is a tribute to Dr S. S. Bhatnagar, who played a lead role for producing an up-to-date *Dictionary of Raw Materials and Industrial Products of India* under the auspices of the Council of Scientific & Industrial Research. In 1948, Dr S. S. Bhatnagar, said "Producing an up-to-date Dictionary of Raw Materials of India, under the auspices of CSIR is necessary". He further emphasized that in view of the urgent need for exploring the latent resources of the country, the scope of the Dictionary should be expanded to include *Indian Industrial Products* including *Raw Materials*. Since then, the *Wealth of India-Raw Materials* series has grown in to a wide-ranged and well-structured information resource on plants, animals and minerals of the country. Because of this, the demand of the *Wealth of India-Raw Materials* series has been growing enormously all over the world. Pandit Jawaharlal Nehru, the first Prime Minister of free India said, "I have found this dictionary fascinating and it has opened out vistas of thought to me. I have no doubt that this book, produced by many scholars and experts and after much labour, will be of great value to the builders of new India".

The *Wealth of India* is based on the *Dictionary of Economic Products (DEP)* and *Commercial Products of India (CP)*, compiled and brought out between 1889-1893 by Sir George Watt, a Scottish botanist from Glasgow University, Glasgow, associated with the Bengal Education Department, the then Government of India. Meanwhile, the seven volumes series of Sir J. D. Hooker's *Flora of British India* also appeared. These two monumental works were, in fact, is a landmark in the study of the economic plants of India. The Wealth of India project is being worked with Information Technology (IT) group of NISCAIR to create a website that reflects the diverse ways in which the people use plants and plants products in their everyday lives, throughout the world. A need based, user-friendly and moderately cost, the *Wealth of India-Raw Materials Series* is ready reckoner for researchers, entrepreneurs, plant based industrialists and planners. It is highly acclaimed world over as a standard reference document for information on India's economic resources. Policy-planners use the information to prevent bio-piracy; the *Wealth of India-Raw Materials* publication played a major role in India's claim for

priority in the US patent case on turmeric. Therefore, Collection and utilization of information resources has become an economic necessity, today.

The First Original Series (11 Volumes+ 2 Supplements)

The first and original series of The Wealth of India- is an encyclopedic publication on India's raw materials resource of plants, animals and minerals, published during 1948-1976 as an 11-volume series with two Supplements-as volumes IV and VI Fish and Fisheries and Livestock, respectively. in 1976. Meanwhile, volumes 1- 3 revised edition plus a supplement were published during 1985-1992. The *Wealth of India Series* provides authentic information on correct nomenclature, English and vernacular names, occurrence, distribution, plant and animal species description and illustrations, agricultural and horticultural practices, plant breeding, managements of pests and diseases of crops, area and production, harvesting and storage, trade and marketing, drug names, chemical constituents, literature and a general index, etc., are some of the silent features of this compilation.

The plant entries are arranged in alphabetical sequence of their generic and species names. The articles on animals and minerals with their scientific equivalents are given under the English names, at their proper places. The coverage spans the habit, distribution, breeding, cultivation, area and production, manure and fertilizer applications, diseases and pests and their control measures, harvesting and storage, chemical composition and utilization, marketing and trade, in case of plants; habitat, distribution, feed, life cycle, and conservation in case of animals; and occurrence of ores, processing, production, consumption and marketing, in case of minerals. Index to botanical synonyms, cultivars of crop plants, common English names, vernacular names, active principles and other important chemical compounds products and trade names facilitating easy access to information are given. Cross references, list of books and journals cited in the volumes are also given. The *Wealth of India* publication series is therefore, eagerly sought after by researchers, progressive farmers, entrepreneurs, naturalists, environmentalist, plant-based industrialists and planners, etc., as an authentic reference work.

The Wealth of India covers information on top priority areas such as conservation and utilization of natural resources and its management, transgenic crops, bio-fuels, biodiversity and intellectual property rights (IPR), bio-piracy, alternatives therapies, wild relatives of plants, conservation status of species and tools for habitat monitoring, waste management, rural economic development, environment and eco tourism, employment and other purposes. Its computerized database is also being provided on NISCAIR's website. The *Wealth of India-Raw materials Series* is a ready reckoner for researchers, entrepreneurs, plant-based industrialists and planners. It is highly acclaimed world over as a standard reference document for information on India's economic resources.

Asian Health, Environmental and Allied Databases (AHEAD) Project

As per the policy matter decided at that time the CD was not a substitute for the book/ WOI volumes. All the Information collected for CD updates, suitably augmented, merged, checked, and standardized was processed to print supplements series to the *Wealth of India- Raw Materials..* At this stage it was decided to go digital, taking each opportunity to expand the database. Three CD-ROMs were brought out during 1996-1997 under a programme funded by the International Development Research Centre

(IDRC), Canada. All the printed volumes on raw materials so far (1948- 1992) went into the disk, labelled D 2.1, while updated information was incorporated in D 2.2 and D 2.3. These C Ds are however, neither available nor operative any more.

The First Supplement Series (1987-88 & 89 &1993-94)

Vol 1-5 (A-Z)

The Wealth of India –Supplement Series was initiated to bring together the updates over 2000 entries from A to Z, for the period 1987 to 1994. The *First Supplement Series* of the *Wealth of India- Raw Materials* completed in 2004. Existing entries were sought to be updated and additional plants included. A total of 3 volumes (vol.1, A; vol.2, B; and vol.3, Ca-Ci) plus a Supplement of the revised series were brought out during 1985-1992. Thus the first supplement Series include: Vol 1(A- Ci), Vol 2 (Cl-Cy), Vol 3 (D-I), Vol 4(J-Q) and Vol 5(R-Z) were published in 2000, 2001, 2002, 2003, and 2004, respectively.

The Second Supplement Series (1982-86 & 1995-96)

Vol 1 (A – F)

The present volume published in 2006, covers articles from A-F for seven-year update period from 1982-86 and 1995-96. It includes 447 plant genera and 978 species. Six new genera namely, *Aeluropus*, *Acrocephalus*, *Catalpa*, *Cremastra*, *Cremanthodium* and *Cuphea* and 96 species carved for the first time are new to *Wealth of India-Raw Materials Series*. The major articles being *Acacia*, *Allium*, *Anacardium*, *Brassica*, *Elaeis*, *Eucalyptus* and *Euphorbia* feature in great detail. Changed botanical names have been retained with their new names followed by an '=' sign to indicate the latter's validity.

Vol 2 (G – Ph)

The present volume covers alphabet from G-Ph. It includes 365 covers extensive information on plants genera and 695 species. Five additional genera, viz. *Jacquemontia*, *Kallstroemia*, *Koelpinia*, *Malaxis* and *Photinia* and 50 additional species have been incorporated in this volume. The major genera- *Glycine*, *Helianthus*, *Hevea*, *Ipomoea*, *Lycopersicon*, *Mangifera*, *Mentha*, *Nicotiana*, *Ocimum*, *Oryza* and *Pennisetum* feature in detail. Besides, some plants, viz. *Helicteres isora*, *Houttuynia cordata*, *Hymenocallis littoralis*, *Ipomoea cairica*, *Lantana camara* var. *aculeata*, *Momordica charantia*, *Narcissus tazetta*, *Phoenix dactylifera* and their natural products have been found to possess anti-HIV+, anti-AIDS and anti-cancer activities.

Vol 3 (Pi – Z)

The third and final volume of the Second Supplement Series on Raw Materials, encompasses entries within the alphabet Pi to Z. It covers 539 plant species belonging to 243 plant genera. Of these; nine additional species, viz. *Piper pedicellosum*, *Rhynchosia beddomei*, *R. heynei*, *R. suaveolens*, *Rubus insignis*, *Tanacetum tibeticum*, *Trachycarpus takil*, *Vitis assamica*, and *V. elongata* reported in this volume are entirely new to *Wealth of India –Raw Materials*. The volume highlights profiles on *Oryza*, *Solanum*, *Terminalia*, *Triticum*, *Vigna*, *Zea*, and *Zingiber*

Attention has been paid to the sustainable developments and managements of the plants useful in soil conservation, social-forestry, apiculture, sericulture, etc., in consideration of resource based on rural development. The volume also reports a large number of trees like *Plumeria alba*, *Polyalthea longifolia*, *Pongamia pinnata*, *Shorea robusta*, *Taraxacum officinale*, *Tecoma stans*, *Tectona grandis*, *Tephrosia purpurea*, *Terminalia arjuna* etc., which can act as living filters for air pollutants. Today, the threats posed by climate change and lost biodiversity world over, our Mother Earth desperately needs cooling. Therefore, the way to diffuse the climate change crisis is to plant more trees.

For more reading

- Chakravarthy 1975 *Economic Botany* **29**, 31-38
- Kamala Ramachandran, 1997, *Proc. Indian Natn Sci. Acad.* **B63** No.3 - .139-150.
- The Wealth of India—Raw Materials Vols. I-XI (1948-76) and vols 1-3 Revised Series (1985-92), New Delhi : Council of Scientific and Industrial Research
- Watt G A 1972 Dictionary of the Economic Products of India by G. Watt. (Superintendent, Printing, Government of India, Calcutta), 6 Vols (1889-1893), Index 1896; reprinted (Delhi: Cosmo Publications).

Monographs

Several technical monographs written by the experts in the Division have found pride of place in libraries. Each monograph is a comprehensive, well-illustrated treatise on a Specialized topic (mainly a raw material resource of the country) complete with reference sources and index.

- Tea in India by Balasubramanyam
- Citrus in India by N.R Mankad.
- Groundnut in India by Raj D Kak
- Plants for Reclamation of Wastelands by T C S Sastry et al
- Plant Food Flavours by S. Mehtani & P.K. Ingle
- The Useful Plants of India by K. Kasyap & Ramesh Chand
- Glossary of Indian Medicinal Plants-II Supplement with active principles by L V Asolkar, K K Kakkar & O J Chakre