



Science of Plant Life - Vrikshayurveda: A Historical Account

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ABSTRACT: Ayurveda is basically life science which speaks about human life. But human is a social being, hence his life gets connected to other branches of science, hence ayurveda is connected to other sciences, for instance like mrigayurveda, vrikshayurveda, ashvayurveda etc. In the present times, ayurveda is reviving and regaining popularity due to the government support and stake holders. It is not enough if ayurveda alone flourish but its allied branches also must visibly grow.

Vrikshayurveda composes valuable information pertaining to nursery techniques which can be used in the development of nursery protocol and also enhances health and livelihood security of the communities involved as well as the health of the environment. To revive this branch of science, study of content of Vrikshayurveda becomes necessary, for which study of history of Vrikshayurveda is needed. This article is an effort made to compile history points pertaining to Vrikshayurveda.

KEY WORDS: Vrikshayurveda, history, ayurveda

INTRODUCTION

“The true meaning of life is to plant trees, under whose shade you do not expect to sit”-Nelson Henderson. India is nation having rich knowledge of various methods of farming. The importance of preservation of plant life and their growth is a science which the ancient sages were blessed with. Traditional knowledge is vital for sustainability of natural resources including medicinal plants, which is addressed by the science called vrikshayurveda. It deals with science of plant life, their healthy growth and productivity. The subject has evolved from morphological descriptions and uses of plants, in texts such as rigveda and atharvaveda, to treatises dedicated solely to the art of growing healthy plants like vrikshayurveda.

Ayurveda is science that describes panchamahabhuta siddhanta which is as much applicable to plants and animals as it is to human beings. There are ancient sanskrit texts independently devoted to lower forms of life like plants and animals like mrugayurveda , vrikshayurveda etc. Vrikshayurveda is the branch of science that deals with growing healthy plants to obtain desired fruits, flowers, grains etc from them. This will not only help in effective organic nursery management, but also ensures the health of the communities involved and effective waste management.

This article is a humble attempt to gather the history points pertaining to the concept vrikshayurveda and compile it.

MATERIALS AND METHODS

For this article, literary materials were compiled, explored and analyzed in a critical manner from texts like Ayurveda ka Vaijnika Ithihasa by P.V Sharma, Vanaspati, Plants and plant life as in Indian treatises and traditions by Girija- Prsasanna Majumdar and Vrikshayurveda in Ancient India by Lallanji Gopal. Various published research articles on Vrikshayurveda also have been reviewed for this article.

REVIEW OF LITERATURE

Vrikshayurveda in various time period-

Vrikshayurveda in the vedic period:

In the rigveda (1500-1000 BC):

The hymns of rigveda, speaks of 107 applications of plants to make people free from disease, the plants bearing flowers and fruits etc. There is no reference regarding the applications of the knowledge of plants for agricultural and other purposes¹. It also speaks of hundreds of places of origin of plants. A closer knowledge of the properties of the plants, in terms of their bearing fruits and flowers, which may imply observation of trees and plants is indicated.

In the atharvaveda (1000-900 BC):

The hymns of atharvaveda, different herbs and plants are named, classified and praised for their medicinal properties. There is not a word about the connection of the knowledge of plants with agriculture, irrigation and the rest².

The number of plants known shows remarkable increase from 67 in the rigveda to 81 in the yajurveda and 298 in the atharva veda³.

In the kautilya arthashastra⁴ (300 BC):

The first occurrence of the term vrikshayurveda is found in this. It says that the director of agriculture himself conversant with krishitantra (practice of agriculture). The region where the foam strikes the banks is suited for creeper fruits, regions on the outskirts of overflows, for long pepper, grapes, those on the borders of wells, for vegetables and roots etc. Bulbous roots are to be smeared with honey and ghee, stone like seeds to be smeared with cow-dung, etc. Trees are to be burnt in the pit and cow-bones and cow-dung are to be supplied at the proper time.

When they have sprouted, they are to be fed with fresh acrid fish along with the milk of the snuhi plant.

Vrikshayurveda by Salihotra: (around 400 B.C)

This book is divided into 12 chapters. There is mentioning of types of soil, preservation, care of seeds and germination is mentioned. The methods used for the irrigation of the plants, amount of water needed for the proper growth of plant is explained. The fertilizer called as kunapa jala was used for the cultivation of plants. The methods used to protect the trees from extreme weather conditions, treatment of branches and roots if effected by diseases, growing different plants around dwelling place are written in this text. This book also describes about the techniques used to help plants and trees bloom flowers and bear fruits throughout the year irrespective of the season, climate conditions etc.

Vrikshayurveda in puranas:

On account of economic utility of the trees and plants and their various products and their use in many religious activities, the puranas show their great concern for their proper protection.

Vrikshayurveda in agnipurana: (A.D 900)⁵

The chapter 282 in the agnipurana contains fourteen verses⁶. It is presented in the form of a narration by Dhanvantari. It begins the account by mentoring the direction in which the trees are to be planted. The planting is to be done after performing religious rites and under certain auspicious asterisms. For watering the plants in a garden a reservoir is to be constructed. The digging is to be done under certain named asterisms, after performing religious worship. The text names the trees, which are to be planted first. It mentions the periodicity of watering the plants in different seasons, according to the requirements of the soil in them.

For the treatment of a diseased plant the affected part is to be cut with a knife; a paste of vidanga and ghee is to be smeared; and is to be irrigated with cold water. For treating premature destruction of fruits and for promoting the growth of flowers and fruits, two different decoctions are laid down for sprinkling. For preparing a decoction for sprinkling, effective for all kinds of trees, it requires powder of the stool of goats and sheep and of barley and sesamum in the washings of fish. It mentions the meat of fish, covered with vidanga and rice as the pregnancy desire(dohada) of trees, which destroys the diseases of all kinds of trees.

Vrikshayurveda in Vishnudharmottarapurana: (A.D 600- 1000)⁷

In the Vishnudharmottarapurana, the chapter 300 in the second khanda is entitled vrikshayurveda⁸. It is in the form of a narrative by pushakra. He addresses Bhargava rama. He mentions the trees, which are considered auspicious for the four direction. The garden is to be planted on the left side of the house. Before planting a tree, the soil is to be prepared by sowing sesamum and pulverizing them. Before planting a proper worship is advised. The asterisms favourable for planting are listed.

Plants which are auspicious are named. They are to be planted first. The other are to be planted after these are grown in abundance, avoiding shalmali, kovidara, devadaru, vibhitaka, asana, palasha and pushkara are specially recommended for a garden attached to a temple.

A proper spacing between the trees is advised. Trees, grown closely, through one another and their roots get interlocked.

A number of decoctions are mentioned for sprinkling. Like, one is kulatha, maasha, mudga, sesamum and barley mixed with milk, boiled and then cooled, etc.

For the growth of fruits and flowers treatment is recommended as their pregnancy desires(dohada) of mango trees, mridvika, badara, bhavya etc. Vidanga covered with rice, and the meat of fish are mentioned as dohada for all kinds of trees.

It is to be noted that the account in the vishnudharmottarapurana and also of agnipurana can be seen to be based on the vrikshayurveda chapter in the brihatsamhita of varahamihira.

Vrikshayurveda in samhitha period:

Varahamihira's brihatsamhita (505-580 A.D)⁹:

In this book, chapter 54 is entitled vrikshayurveda. It has 31 verses¹⁰. It advises the establishment of aaramas (gardens) in the precincts of reservoirs. It deals with preparation of soil, auspicious trees, proper seasons for transplantation, seeds treatment etc.

Bhattotpala, in the commentary on the chapter 54 of brihatsamhitha, records quotations from the writings of kashyapa. The time period is not directly told. Bhattotpala's date is A.D 966, and that of varahamihira is A.D 505-580¹¹.

Vrikshayurveda in kashyapa samhitha: (A.D 450)¹²

Exact name of the work composed by kashyapa is not known . He mentions specific requirements of a good soil, auspicious trees, smearing of cow-dung for seeds, recommends different seasons for replanting trees, according to the stage of the growth of their branches and stems.He refers to the signs and symptoms of a diseased tree the causes of their disease, and the treatment to be done.According to him, the affected part is to be cleared with a knife and them smeared with vidanga and ghee¹³.

Vrikshayurveda by parashara :(100 B.C or A.D as earlier?)¹⁴

The text claims that it was composed by Parashara, when he was requested by the rishis(sages) assembled at a conference to give an account of the herbs and plants that were beneficial to the mankind¹⁵. In presenting an account of botanical knowledge as developed in the post- vaidic classical period, they observe that they have made use of this text, which is borne out by the details under the various divisions of botany which have been given from parashara's text. The discovery of the text was announced by Nityendra Nath Sircar about half a century back and he published an account of it with the help of extensive quotations pointing out the advanced botanical knowledge of its author. Sircar claims that a manuscript of the text was diagnosed by his father, the late Vaidyashastri Jogendranath Bhishagratna of navadvipa.

The text is divided into six parts namely, Bijotpatikanda, Vanaspatikanda, Vanaspatyakanda, Virudhavallikanda, Gulmakakshupakanda, and Chikitsakanda.The available manuscript is not complete in the sense the sixth, and the last part entitled Chikitsakanda dealing with the treatment of plant diseases is not in it¹⁶.

Vrikshayurveda by sharangadhara: (A.D 1363)¹⁷

An anthological compilation of sharangadharapaddhati by sharangadhara belonging to the thirteenth century, is yet another ancient text which in its chapter "upavanavinoda" deals with an allied subject, viz., "arbor - horticulture".

There are 237 verses grouped into 15 sub chapters¹⁸ namely glory of trees, good and evil omens relating to residence near the trees,selection of soil, classification of plants, sowing of seeds, the process of planting, watering of plants, the method of protecting plants, construction of a garden house, examination of soil for digging wells, method of nourishing plants, kunapa water, treatment of plants in diseases and health, botanical marvels, and ascertainment based on signs in plants.

Vrikshayurveda by surapala: (A.D 1000)

Vrikshayurveda written by surapala, a royal physician in the court of king Bhimapala during tenth century A.D was also awarded as vaidyavidyavarenya.

Total number of verses in the text is 325. The work is divided into 13 chapters¹⁹.

Surapala's vrikshayurveda is a systematic composition starting with the glorification of trees and tree planting. It then proceeds to discuss various topics connected with the science of plant life such as procuring, preserving and treating of seeds before planting; preparing pits for planting saplings; selection of soil; method of watering; nourishment and fertilizers; plant diseases and protection from internal and external diseases; layout of a garden; agricultural and horticultural wonders; groundwater resources etc.

CONCLUSION

Vrikshayurveda is of great relevance in agriculture and horticulture. It includes collection, selection and storage of seeds, germination, various techniques of plant propagation, grafting etc. The importance of vrikshayurveda is increasing with the due increase of usage of pesticides to control the pests which is proven to be environmentally disastrous.

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