

3. Ancient Indian Knowledge: Plants and Their Uses

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Figure 3.1: Plant and Their Uses

Abstract:

Since the very dawn of civilization, man was curious to know about his surroundings. This curiosity to know about nature and unveil its mysteries led to the establishment of certain knowledge, based upon facts. He also tried to understand its laws and utilize them to his daily life. Genius persons with their persistent efforts, careful experimentation and exact reasoning have collected a mass of tested information which we call science.

Plant kingdom is very rich in science because each part of plant consists of active principles useful for humans. In other words, science is a classified knowledge gained from a systemic study of behavior of nature. “Science is one of the major activities of mind and it may perhaps be regarded as a mood in which we consider our world. No man is always in the same mood and no man of science remains permanently in the ‘scientific mood’ or ‘scientific temper’. Scientific temper has a number of characteristic features embodied in its definition. Scientific mood is defined as “Open- mindedness, a desire for accurate knowledge, confidence in procedures seeking knowledge and the expectation that the solution of the problem will come through the use of verified knowledge.”

Technology concerns the systematic use of modern methods for applying scientific principles effectively. It involves their use in a variety of roles. Some of which are traditional, some still emerging. It is a system by which method can be used relevantly to support and complement each other (Figure 3.1). Technology can help to evolve a system with the basic object of developing creative talent. It is based on the scientific principles and practices emerging from vigorous research, teaching and training.

The most important plants vitally useful for humans are:

Amla, H; Indian gooseberry, E; Embilica officinalis, Gaevtn, Akhrot, H; Walnut, E; Juglans regia, Juglandaceae, Brahmhi, H; Indian penny wort, E; Plantago ovata, Plantaginaceae, Giloy, H; Tinospora Cordifolia, Menispermaceae, Nimbu, H; Lemon of India, E; Citrous aurantiifolia, Rutceae..

3.1 Introduction:

Ancient Indian literature is full of ancient Indian knowledge in various fields. Ancient Indians understood that knowledge is to be applied for the welfare of masses. Later on, vigorous research paved the path for modifying and applying that knowledge extensively in various fields. Some of the fields may be mentioned here¹⁻¹².

Ancient Indians had basic knowledge of various spices which later were used as patent drugs e.g. Turmeric (curcuma Longa) “The golden spice” has a potent anti- allergic property which helps fight respiratory skin and digestive system allergies.

Traditional uses of plants and plant products are fundamental for human survival on the earth. Ancestors have used various plants products traditionally from hilly areas. From tribal and Himalayan Nilgiri regions a detailed account of plant and plant formulations have been known for health with application of traditional knowledge.

Satreetha from a tree was used as soap and detergent in different regions has also been documented⁸⁻¹⁰. Uttrakhand state is well known for its rich vegetation wealth and cultural heritage. Mention of some plants follows:

GOKHRU (Gokshuva- Sanskrit, chhotagokhru- Hindi, Zygophyllaceae) is a prostrate plant of subtropical region and abundantly found throughout India up to 11,000 ft. from July to October. The size of the plant varies from 1 to 2 ft. The plant bears tiny yellow flowers (1 cm in diameter) from August to September. The plant is auto tropic and dicotyledonous.

Ancient Rishis and Munis knew very much about the plant and described the plant as follows:

गोक्षरः शीतलः स्वादुर्बलकृदवस्ति शोधनः
मधुरो दीपनो वृष्यपुष्टिदश्चाश्मरीहरः

They believed that its fruit is cooling, diuretic, toxic, aphrodis, used in painful micturitions, calculus affections, urinary discharges and impotence, in gout, kidney diseases and gravel. They suggested that fruit power of the plant is helpful in treatment of impotence in ladies. Later researches on different parts of the plant supported the thinking of ancient Rishis and Munis.

Among the so many principles isolated and identified. Diosgenin is very important and has been reported to serve as the starting material for the synthesis of synthetic harmones.

NEEMBU (Nimbu. H; Lemon of India, Lime. E; Nimbuk. S; Citrus aurantiifolia (Christm) Swingle) is common to Indians and frequently used to prepare pickles. The most important feature of nimbu is that it is always acidic while other fruits become sweet on ripening. It is the main source of vitamin- C and has been reported to be helpful in curing many ailments. Ancient Indians have described nimbu as follow:

निम्बू कमम्लं वात्घ्नं दीपनं पाचनं लघु
निम्बूकं क्रिमिसमूहनाशनं तीक्ष्णमल्लमुदर ग्रहापहम

Extensive researches on nimbu resulted in giving many principles extremely

important for human being. Researches have supported that this can be used in the treatment of many ailments. Vitamin- C is the most important. Inadequate intake of vitamin- C is responsible for male infertility. Male sperm count is decreased due to inadequate intake of vitamin- C.

BLACK PEPPER, E; (Piper nigrum) Kali Mirch, H; Piperaceae:

In some forests it grows itself but in South India it is cultivated. First crop produce is obtained in Aug. - Sept, while second crop is produced during March – April. Ancient Indians knew well about it and they described it as:

यदाद्रं मधुरं पाके नात्युष्णं कटुकं गुरु
किंचित्तीक्ष्णगुणं श्लेष्मप्रसेकिस्यादपित्तलं

Rishis and Munis have expressed the qualities of black pepper due to which it has been used in various ailments. It is useful for human beings due to its expected active principles. Modern researches have established. “The king of species” Black Pepper which was used as a sacred offering in ancient times and is a popular ingredient in cuisines across the globe, increases the bio-availability of other medicinal ingredients when present in formulation and is an effective throat decongestant.

Cumin Seed, *Cuminum cyminum* L:

There are two varieties of cumin- white & black. Black variety is costlier than white. Other species are mixed with black cumin. Cumin is cultivated in India specially in UP Rajasthan and Panjab. Ancient people have described cumin as follows:

जीरक रूक्षं कटूष्णं दीपनं लघु
संग्राहि पित्तलं मेध्यं गर्भाशयविशुद्धिकृत
ज्वरघ्नं पाचनवृष्यं बल्यं रुच्यं कफापहम

Black Cumin (*Nigella Savita*) seeds have an earthy and pungent aroma and are used in Indian and Middle Eastern cuisines. It is mentioned in history that Cleopatra used black cumin seed oil for her hair and smooth skin. The seeds help to improve digestion, relieve abdominal gas and act as a laxative.

It has also been used in the treatment of headache, eye-disease, toothache and respiratory disorders.

CARDAMOM (*Elettaria Cardamomum*): “The Queen of Spices”, has anthelmintic properties which help fighting parasitic worm infections.

There are many other Indigenous spices which were known and used by ancient Indians. These found use in Indian and Middle Eastern cuisines. Dr. H.G Khorana, born in Multan, graduated and P.G from Univ. of England, an Indian scientist, who extended his study on functioning of enzymes has revealed that ancient Indians had good understanding of functioning of enzymes. He was awarded noble prize in 1960 for this work.

We have been hearing from our ancestor, the ancient traditional farming when the peasants did not know the application of scientific principles to make agricultural work more fruitful and productive. The result was that the yield of the agricultural production was low.

At that time there was no availability of artificial manures and the peasants had to depend on natural manures. That time they had to face scarcity of water when rainfall declined very much. Now-a-days effective use of technology in agriculture work has brought revolution which is called “Green Revolution”.

This could be possible due to availability of water from reservoirs and bore wells. This all could be possible due to ancient Indian knowledge, in which our ancestors believed and worked for long –long time. This is the scientific knowledge which gave birth to agricultural technology. In the absence of the above, green revolution would have been only a dream. at the present time, tractors for cultivation, tube wells/ bore wells for watering, other machines like thrasher and other are in common use for obtaining clean production of the crop and the farmers are developing self-confidence and becoming self-dependent.

CHENOPODIUM ALBUM, linn (family chenopodiaceae) in Hindi bathua is commonly used in Indian kitchens and is full of iron. Brassica compestris, linn (family cruciferae), sorson is frequently used to prepare vegetable but many people do not like to eat because of its peculiar smell is very useful for the treatment of abscess and bounds and is also antiseptic.

EMBLICA OFFICINALIS, Gaertn (family euphorbiaceae) amla Sorghum vulgare, Pers (family- gramineae) Jowar Abelmoschus esculentus, linn (family- malvaceae) bhindi and many other plants are used commonly but some people do not like them the people who do not like commonly used plants, experience unpleasant reaction by the body. This unpleasant reaction by the body to substance which do not cause people any harm is known as ‘allergy. The word allergy ‘means different things to different people it is more precisely defined as an induced response by the body physiology to a substance which does not apparently cause much harm. the best-known examples of allergy are Asthma, eczema and hay fever. The common manifestations of allergy are sneezing, wheezing, itching and migraine.

3.2 Methodology:

During survey different areas and plants growing in that area were observed very carefully. Discussion was held with local people who explained about the importance of various plants in their areas. A good number of plants which are useful for human being are shown in the following table.

Table 3.1: Plants Which Are Useful for Human Being

| Sr. No. | Plant | Scientific Name |
|----------------|------------------|-------------------------------|
| 1 | Mango | Mangifera indica L |
| 2 | Ajawain (celery) | Traebyspermum ammi L |
| 3 | Walnut | Juglans regia L |
| 4 | Linseed | Linum Usitissium L |
| 5 | Tinospora | Tinospora Carolifolia (Wild) |
| 6 | Land Caltrops | Tribulus terrestries L |
| 7 | Cumin Seed | Cuminum Cyminum L |
| 8 | Black Pepper | Piper Nigrum L |
| 9 | Lemon of India | Citrus Aurantiifolia (Chrism) |
| 10 | Indian Pennywort | Centtella asiatica (L) Urban |

| Sr. No. | Plant | Scientific Name |
|---------|----------------|----------------------|
| 11 | Spongell Seeds | Plantago Ovata Forsk |
| 12 | Indian Aloe | Aloe Vera (L) Burm F |

Discussions on the utility of various plants were held with different groups peasants. Important uses were recorded. An observation method was used to explore the availability of medicines, spices, soaps and detergents¹.

Table 3.2: Plants Based Products

| Sr. No. | Plant Name | Local Name | Use | Plant part used |
|---------|--------------------------|--------------|------------------------------|-----------------|
| 1 | Sapindus Mukurossi Vahl. | Reetha | Bathing, washing and shampoo | Seed Coat |
| 2 | Malva sylvestris L. | Kunzi | Washing | Roots |
| 3 | Ipomoea cairica L. | Bharad | Bathing | Seeds |
| 4 | Sesamum indicum L. | Til | Bathing | Leaves |
| 5 | Impatiens balsamina L. | Budh Til | Bathing | Stem |
| 6 | Chaerophyllum Villosum | Jungli gajar | Washing | Tubers |
| 7 | Boehmeria rugulosa Wedd | Gethi | Bathing | Bark |

3.3 Results and Discussion:

Plants and plants-based products are involved in the utilization of plant materials as medicine vegetable, soap and detergent by the local communities. Processing technique of plant material is the result of traditional knowledge developed by the local people from the ancient time. The number of plants used for different purpose varies from locality to locality ranging from 2-14 species. The availability of plant is highly significant for the various purposes. The species which were considered to be suitable for cultivation have been categorized. The important domesticated plants are:

- Turmeric
- Bathua
- Methi
- Chura
- Madua
- Til
- Reetha
- Semal
- Jhangara
- Balam Kheera
- Oak
- Bhimal etc

3.4 Recommendations for Mass Education:

A. General Awareness About Useful Plants:

India is known as a country of villages where more than 70% of the population resides. Most of the people though living within the flora of the region, do not have awareness and understanding of plants. Urban population in this regard cuts a sorry figure as they do not even understand/ know about different crops grown in the country.

In order to develop awareness about useful plants, such people as given above should be taught and taught in groups and occasionally arrangements for their visit to different gardens and fields should be made. People will be more benefitted after developing this awareness and understanding.

B. Selection of Appropriate Taxa:

A survey of plants is very essential to categorize useful and harmful plants. Only useful plants must be permitted to grow in gardens and road sides. This will help in minimizing the harmful contents causing hazards in people.

C. Restricted Use of Plants:

An over dose intake of plants product is not recommended as some plants may be harmful for human beings. e.g. ginger, it is very beneficial but raw or candied ginger may irritate oral tissue and other mucus membranes.

Grape fruits are good for health with high vitamin- C and potassium but these can provoke an allergic reaction in people sensitive to citrus fruits. Grape juice can reduce the effectiveness of certain medications.

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