

Medicinal Plants

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Abstract: Medicinal plant is utilised in traditional medicinal and ethnomedicina. These dynamic fields are the intersection of photochemistry and plant biology. Medicinal plants are used in non-industrial societies. Because they are cheaper and available as compare to modern medicine. Medicinal plant face the general threat's such as climatic change and habitat distruction. This present paper is focused about the medicinal plant's current status and future genoms. The widespread use of herbal medicinal.plants and herbal products has now become a key issue in industries and in developing countries.the widespread use of herbal remedies and health care preparation described in the Vedas and Bible.the traditional medicine uses 15 plants belonging to different families are reported in this review article.

Key words: Medicinal Plants, Local Name, Part Used, Mode of Treatment, Demand and Market Value and Conservation

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INTRODUCTION

Medicinal plants are also called medicinal herbs, medicinal plants are used in traditional medicines. They are used in non-industrialized societies because they are mainly available and cheaper than the modern medicines. These medicines are also used as food, flavonoid medicine, and perfumes and in certain future activities. Treatment with medicinal plants is safe and has no side effects. These remedies are synchronized with nature, which is the biggest advantage. These herbal medicines can be used or apply in any age, group, and sexes. Medicinal plants such as aloe, Turmeric, neem, ginger and tulsi cure several diseases. These considered home remedies in many parts of the country. Medicinal plants are considered as rich source of ingredients and can used in drug development even pharma or synthetic drugs. There has been a tremendous increase in the use of herbal medicines. Since 1999 WHO monographs on selected medicinal plants. There are 45000 medicinal plants species in India. From where 500 species are used in indigenous system and about 2,000 species appear in the literature. Recently the world health organization estimate that 80% people worldwide herbal medicine partially for their primarily health care. The demand and utilization of medicinal plants have increased globally, there is an importance of medicinal plants and traditional health system in solving the health care problems. throughout the world people are seeking herbal remedies. medicine plants naturally synthese and accumulate some secondary metabolites like resins, lactones, volatile oils, glycosides etc. The medicinal plants have been used for treatment of illness and diseases. Plant is an important source of medicines and plays a important role in the world health. recently WHO estimate that 80% of people worldwide rely on herbal medicine. In Germany 600-700 plants medicine are available and are prescribed by 70% of German physicians. There is now consequence regarding the importance medicinal plants and traditional health system in solving the health care problems.it has been recorded that the about 450-500 are growing or available in Bangladesh have therapeutic values. Bangladesh is a fertile land country and has a rich diversity of flora of medicinal plants. I did has 15 agroclimatic zones and 17000-18000 species of flowering plants of which 6000-7000 are estimated to have medicinal usage, documented system of medicine, like unani, siddha, Ayurveda and homeopathy. India is also rich in medicinal plant diversity with all the three levels of biodiversity such as species, genetic, and habitat diversity. The medicinal plants and their existing ethno botanical knowledge will be beneficial in the future understanding, sustainable management, and research. Treatment with

medicinal plants is considered very safe and there are no side effects, apart from medicinal uses, herbs are also used in dye, pest control, food, perfumes, tea and etc. Now a day's medicinal herbs are important sources for pharmaceutical manufacturing. The health and wellness depend on a delicate balance between the mind, body, and spirit. Good health is achieved when your mind, body, and spirit are in harmony with the universes. A disruption of this harmony can lead to poor health and sickness. The primary focus of medicinal plants is to promote good health. Medicinal plants are not only a major resource base for the traditional medicine and herbal industry. In several parts of the world many herbs are used to honor their king, after finding the role of herbs, lots of consumers started the plantation of tulsi and other Medicinal plants in their home garden. Medicinal plants are the backbone of traditional medicines, the main use of medicinal plants Has been placed for treatment Rather than prevention of diseases. Raw material of medicinal plants often used because the extraction of active ingredients that are used in the various drugs, medicinal plants therefore plays an important role in the health care system of development countries. In many countries there is an increasing effect on health care, basic health care is not effective but affordable. The medicinal plants are used for curing the diseases and ailments using natural medicine.

AIM- To study the importance of Ayurvedic medicinal plants and their uses

OBJECTIVES

1. To provide scientific information medicinal plants and their usage.
2. To create awareness on the role of medicinal plants in healthcare and drug development

MATERIAL AND METHOD

All classical text available has been reviewed database available also studied.

STUDY RATIONALE

Medicinal plants are considered as rich resources as of ingredients, which can be used in drug development either pharmacopeial non pharmacopeial or synthetic drugs. Apart from that these plants play a critical role in the development of human cultures around the whole world.

REVIEW OF LITERATURE

Medicinal plants have aided our survival for all of human history. 80% of planets still use herbs as their primarily source of medicine. Medicines herbs are found in the personal effects of otzi the iceman. The oldest written of evidence for medicine plants is used for preparation of drugs has been found In the Sumerian clay slab from Nagpur, approx. 5,000 years old. In the holy books Vedas mention the treatment with the plants and many spice plants are used even today originate from India pepper, clove etc. many plants are used as a culinary herbs and spices have been used as medicine's. While they do require responsible use to avoid interactions with other treatments, herbal medicine might be more accessible solutions for managing for some chronic conditions. In the early writing such as Rigveda, Atharvaveda are the earliest available documents in the medical knowledge that formed that formed the basis of Ayurvedic system.

Uses

The 30% of preparations are derived from roots, 16% whole plants, 14% bark, 10% fruits, 7% seeds, 6% both stems & leaves, 5% flowers, 4% rhizomes, 3% wood and only less than 20% of the species used are cultivated. Medicinal plants are chiefly used for curing stomach pain, fever, cold & cough, bleeding & wounds, fungal infection, burns, rheumatic pain, insect bite, influenza, diarrhea, jaundice and cirrhosis^{7,18,24}. The plants such as: *Adiantum venustum*, *Capsicum annum*, *Hyoscyamus niger*, *Primula denticulate*, *Salix elegans*, *Salvia lanata*, *Tagetes arecta*, *Viola biflora* etc. appear vary high in demand in drug industry as they are being used in largest number of the preparations²⁸. The Medicinal plants available in Uttarakhand and their uses are tabulated in Table-1.

Demand and Marketing

Medicinal plants provide the natural raw material for most of the oral and non-oral traditions medications. The raw material such as herb and shrub can be grown and harvested in the period of one year. cultivation and sustainable harvesting of medicinal plants with scientific knowledge and proper marketing system might be a big source of additional income for improvement of livelihood of rural people³⁵. In the

global market, the trade of herbal medicines is about Rs. 27 billion per year whereas in India it is about Rs. 3.5 billion per year and it is increasing at the rate of 7% per year¹⁴. India can take advantages of increasing demand and low availability of medicinal and aromatic plant resources in the other parts of country and start to grow highly valuable medicinal plants in high altitudes areas.

Cultivation and conservation Medicinal plants are valuable natural resources. cultivation of many medicinal plants on private land requires both the to conserve the species. And supply the quality of raw material to the industries. The variety of herb, shrub and tree are collected from different agro climatic region of the country which have been introduced in the garden and many of the species of rare and endangered. Many efforts have been made during the last year in conservation of medicinal plants in their native ecosystem. The participants in the conservation of medicine plant is essential for long term cooperation and sustainability. new approaches of biotechnology and conservation strategy can help preserve and utilize the indigenous knowledge of medicinal plants for humankind.

Factors affect the cultivation of medicinal plants:

- Light is the only source of energy for continuation of life of the plants. It affects photosynthesis, opening and closing of stomata, plant movement and seed germination and vegetative growth like tuberculosis. Temperature is the major affect the cultivation in the medicinal plants. The sudden change in temperature can caused ice crystals of the plants. As the water comes out of the cells and ultimately plants die. The rate of photosynthesis is affected by the change in temperature. The rate of respiration increases with the increase in temperature. Atmosphere humidity is also the major effect on the cultivation of medicinal plants as it is present in the form of water vapors and it is known as atmospheric humidity. Altitude, the altitude is the most important factor that affects the cultivation of medicinal plants, increase in the altitude, the atmospheric and temperature decreases, the relative humidity and light intensity increases., Thus the climatic conditions change with the height, and they produce change in the vegetative pattern. Rainfall and

snowfall have a large effect on the climatic conditions. The main source of water for soil is rainwater. Soil is defined as the surface of the earth, formed by the wearing of rocks, the soil should contain appropriate amount of nutrients, organic matter, and other elements to ensure that the medical plants growth and quality. The soil conditions include the soil type, pH, fertility, moisture etc.

The soil made up of five components are: -mineral matter, soil air, soil water, organic matter, and soil organisms

Polyploidy are planting whose cell contains two sets of chromosomes, derived at fertilizer from the one set of pollen and one set of the eggs $2n$ are known as diploid.

Mutation also plays a role on effect of cultivation of medicinal plants and it is the sudden heritable change in the structure on the gene on chromosome numbers.

Importance of medicinal plants

Many herbs are used as blood purifiers to change the conditions by eliminating the metabolic toxics. These are also called as blood cleansers. These herbs help to improve the immunity of the person and reducing conditions such as fever.

Some herbs also having the anti-biotic properties, turmeric is helpful inhibiting the growth of germs, microbe's, and bacteria. Turmeric is widely used as home remedy to heal cut and wounds.

Ginger and cloves are used in the certain cough syrup. Some herbs like Turmeric, aloe Vera are commonly used as antiseptic and are very high in their medicinal values.

Honey, Turmeric can treat a fresh cut and wound.

A wide variety of herbs including giloy, aloe is used as tonics. They can also be nutritive and healthy as disease individual.

Other aromatic herb such as peppermint, cloves and Turmeric add as pleasant smell to the food, hence increasing the rate of the meal.

Herbs such as black pepper, aloe, red clover are used for healing wound, sores, and boils.

Medicinal plants use and misuse: -

Recent studies show that the two third of traditional medicinal plants are as effective as medical drugs, but it is difficult to get a sound active. Some important rules before buying and taking any herbal medicines: -

Never believe in the miraculous effects of exotic plants, avoid food supplements especially those sold on the internet, always inform about your potential side and any possible interaction with the drugs.

MEDICINAL PLANTS AND THEIR USES

Sl.No.	Botanical Name	Local Name	Parts Used	Uses	Mode of treatment
1	Achyranthes bidentata, Blume.	Dansh	Root	As Laxative	One palmful root decoction in one litre water given two times for vigour
2	Artemisia nilagirica, Pampanini.	Patti & Kunj	Whole plant	For urinary tract infection	One palmful whole body decoction in one litre water given one cup with gur
3	Artemisia sacrorum, Ladeb.	Kaparpatti & Jholpatti	Leaf & Bud	For hair fall	One palmful leaves & bud decoction in two litrewater given one cup twice a daily
4	Abies webbiana, Lindl.	Talispatra	Bud	In cough	One palmful bud decoction in 3 litre water given thrice a day
5	Adina cordifolia, Hook. F	Haldu	Bud & leaf	For wound & fever	Applying paste of new bud on the wound. Decoction of leaves in $\frac{1}{2}$ litre water given thrice a day in fever

6	Acacia catechu, Wild.	Khair	Stem	In urine problem & dysentery	One palmful stem decoction in ½ litre water given one cup four times a day
7	Achyranthes aspera, Linn.	Chirchira	Whole plant	For teeth problem	One palmful whole plant in ½ litre water
8	Aconitum balfouria, stapf.	Bishjaha	Root	In wound	One matured root burns in 1litre oil gives a ointment
9	Acorus calamus, Linn.	Banj	Root	Fever & pain	Two matured root with fibrous food given daily
10	Adiantum venustum, G. Don.	Hanshraj	Seed	For chest problem and hair fall	One palmful seed given with fibrous food
11	Aesculus indica, Colebr.	Pangar	Fruit	In stomach problem	One palmful fruit decoction in ½ litre water given with gur
12	Agrimonia pilosa, Ledeb.	Kafliya	Whole plant	For purification of blood	½ palmful whole plant decoction in three/ four litre water given ½ part with gur in morning
13	Ajuga parviflora, Benth.	Ratpatia	Whole plant	In arthritis	One palmful whole plant decoction in ¾ litre water given one cup daily
14	Allium stracheyi, Baker.	Jambu	Whole plant	For stomach problem	Two palmful whole plant given thrice a day
15	Allium wallichii, Kunth.	Jangali Lasun	Root	In infection	Two node given daily

DISCUSSION

The state has high degree of agro- climatic diversity and economic backwardness, harvesting of medicinal plants are less than the artificial synthetic drugs. heavy demand of some of the plants has threatened some of the species and put them to the level of extinction. cultivation and sustainable harvesting of medicinal plants with scientific knowledge and proper marketing system might be a big source of additional income for improvement the livelihood of rural people. there is a growing need for quality of medicinal plants education, which can create the new employment in the area such as agribusiness, processing etc. special provisions be made to teach the agriculture of medicinal plants to the children's in the school's, and the other field. plant species serve as a rich source of biological active compounds. plants continued to be a major source of medicines. Although very few have been thoroughly investigated for their medicinal properties. There is no regular development programmes in the agriculture and forestry sector to promote regeneration of endangered species. Almost all the plants were parts were found to be rich in photochemical flavonoids.

Medicinal plants grow naturally around us. There is need to conserve a medicinal plant, leaves and roots from the most frequently use plants parts in traditional medicine. A single plant part is also used for treating multiple disease for example: - pers, the leaf is used for kidney stones. Various plants are used for treatment of a single disease. The leaf of moringa oliefera lam is used for training of diabetes, the antidiabetic activity of whole plants. It can conduct that native medicinal plant species are rich in plants with important medicines properties with the development of rural based community

CONCLUSIONS

The above study shows that to ensure quality, safety of the herbal medicine and the starting of the raw material should be in best, quality. Medicinal herbs can be good alternative for many disease and conditions. They are low cost and moreover they can be brought to the medical food shops, without the need of the prescription. However, herbal medicine can still have unwanted health effects especially when used with the other drugs the study has highlighted the Medicinal

plants and their role in health care. this is only possible if property rights are well defined and are secure. Medicinal plants are the principal health care resources among the most people in India. These herbal products are the symbol of safety and contrast to the synthetic drugs that are regarded as unsafe to Human beings and environment. Although herbs have been priced for their medicinal, flavoring, and aromatic quantities. Traditionally there are lot of herbs used for the ailments related to different seasons, there is need to promote to save the human lives it's time to promote the globally

REFERENCES

1. Akshay, K. R., Sudharani, N., Anjali, K. B. and Deepak, T. M., Biodiversity, and strategies for conservation of rare, endangered, and threatened medicinal plants. *Research and Reviews: Journal of Pharmacognosy and Phytochemistry*. 2(3): 12- 20 (2015).
2. Anonymous Amruth, August, FRLHT, Bangalore. P.10 (1997).
3. Anonymous. The state of Forest Report. Government of India, Forest survey of India, Ministry of Environment and Forests, Dehradun (1991).
4. Azaizeh, H. S., Fulder, K. and Khalil, S. O., Ethnomedicinal knowledge of local Arab practitioners in the Middle East Region. *Fitoterapia*, 74: 98-108 (2003).
5. Bipin, C. J. and Rakesh, K. J., The Role of Medicinal Plants in Livelihood Improvement in Uttarakhand. *Int. J. of Herb. Med.*, 1(6): 55-58 (2014).
6. Bisht, A. S. and Bhatt, A. B. A., Contribution to the Medicinal Plants of Sahastradhara, District Dehradun, Uttarakhand (With Ethenobotanical Notes). *J. of Drug Del. & Therap.*, 2(5), 114-12 (2012).
7. Briskin, D. P., Medicinal Plants and Phytomedicines. Linking Plant Biochemistry and Physiology to Human Health. *Plant Physiol.*, 124: 507-514 (2004).
8. Constable, F., Medicinal plant biotechnology. *Planta Med.*, 56: 421-25 (1990).
9. Dhar, U., Manjkhol, S., Joshi, M., Bhatt, A., Bisht, A. K., Joshi, M., Status, and future strategy for development of medicinal plants sector in Uttaranchal, India. *Current Science*. 25; 83 (8): 956-964 (2002).
10. Ensminger, A. H., Ensminger, M. E., Konlande, J. E. and Robson, J. R. K., *Food & Nutrition Encyclopedia*. Pegus Press, Clovis, California, U.S.A. 2:1427-41 (1983).
11. Joshi, B. C. and Joshi, R. K., The Role of Medicinal Plants in Livelihood Improvement in Uttarakhand. *J. of Herb. Med.*; 1(6): 55-58 (2014).
12. Joshi, K., Chavan, P., Warude, D. and Patwardhan, B., Molecular markers in herbal drug technology. *Curr. Sci.*, 87:1 59-165 (2004).
13. bbiw, D. (1990). *Useful Plants of Ghana*. London: Intermediate Technology
14. Development Group and the Royal Botanical Gardens, Kew, p. 118. Amanor, K.S. (1992). *The New Frontier: Ecological Management and Pioneer*
15. Settlement in the Asewewa District. Draft, Geneva: UNRISD. Anyinam, C. (1987). Availability, accessibility, acceptability and adaptability: four attributes of African ethno-medicine. *Social Science and Medicine*, 25: 803-11. Ayensu, E.S. (1978). *Medicinal Plants in West Africa*. Michigan: Reference Publications Inc.
16. Balick, M.J. and Mendelsohn, R. (1992). Assessing the economic value of traditional medicines from tropical rain forests. *Conservation Biology*, 6