

PROMOTING THE CULTIVATION OF MEDICINAL AND AROMATIC PLANTS FOR ENHANCEMENT OF RURAL LIVELIHOOD IN INDIA

Article Id: AL202101

Nidhi Singh¹, Sushan Singh² and Amandeep Ranjan^{3*}¹Department of Plant Pathology, Dr. Rajendra Prasad Central Agricultural University, Pusa, Samastipur, Bihar, India²Department of Plant Breeding and Genetics, Dr. Rajendra Prasad Central Agricultural University, Pusa, Samastipur, Bihar, India³Division of Dairy Extension, ICAR-National Dairy Research Institute, Karnal, Haryana IndiaEmail: amandeepranjan4@gmail.com

India, being an agrarian country and agriculture contributing approximately 16 percent to its GDP, has huge potential in cultivating medicinal and aromatic plants. Since ancient times, Indian culture has been promoting medicinal and aromatic plants for curing several diseases. The Ministry of Environment and Forests has identified and documented over 9500 plants species with several economic importance. Cultivating these plants can serve the purpose of doubling the farmer's income, enhancing rural livelihood and promoting the entrepreneurial behaviour in rural youth. Cultivation of medicinal and aromatic plants will also assure purity, authenticity and sustainable supply of raw materials that are required for herbal drugs. These medicinal and aromatic plants also have huge demand globally, thus promoting global trade. Despite having several opportunities, they also face several challenges like any other groundbreaking concepts. Thus, this article delivers a brief outline of the present scenario, the importance and scope of cultivating medicinal and aromatic plants.

Since ancient times, medicinal and aromatic plants have been used in curing several diseases and with the increasing population and less availability of healthcare systems to the underprivileged sections of the society, these plants are gaining importance widely all across the world. The Tropical Rain Forests are known to be the World's largest pharmacy as 25% of the vegetation is covered with medicinal plants. Similarly, India has been considered as a treasure house of valuable medicinal and aromatic plant species as it is endowed with various agro-ecological regions that are blessed with the precious genetic diversity of these species. The Ministry of Environment and Forests has identified and documented over 9500 plant species which have immense importance in pharmaceutical industries. The total area and

production of medicinal and aromatic plants in India in 2019-20 have come out to be 6, 28,000 hectares and 7, 98,000 metric tonnes (Anonymous, 2019) respectively. Estimates by the Export-Import Bank of India has put international trade related to medicinal plants at US\$ 60 billion per year and still growing at a rate of 7% annually (Maiti, 2004).

In the present scenario of “back to nature” health care, it has become important that these plant species should not only be preserved but also be cultivated to such an extent that it can meet the demand of people as well as the domestic industries to exploit the bright prospect for export. The shift from collection to the cultivation of medicinal and aromatic plants will also assure purity, authenticity and sustainable supply of raw materials that are required for herbal drugs. Due to the unorganized marketing structure, this sector has not been exploited to its full potential. In view of the insufficient recognition to the useful medicinal and aromatic plant wealth of India, the emphasis has to be given on identifying new sources of drugs, enhancing their productivity and yield, promoting their cultivation among the rural sectors of the country and dissemination of information for research and utilization of these plant species.

International Scenario

The impulsion for initiating action to realize the objective of international recognition and acceptance of indigenous medicine system in the long-run has been provided by the World Health Organization (WHO), the Food and Agricultural Organization (FAO) and the United Nations Industrial Development Organization (UNIDO) which have emphasized that:

- More than 90% of the World’s rural population is exclusively dependent on herbalists and traditional medicines for maintaining a reasonable level of health.
- There is an urgent requirement for consolidating and protecting this valuable heritage.
- It should be improved.

Economic Importance

Traditional medicaments, derived from plants for thousands of years, are now yielding their secrets and gaining importance in modern medicine. About 8000 herbal remedies have been coded in the Ayurveda, which is used as human remedies even now. The curative properties of drugs are due to the complex chemical substances of various compositions

present as secondary metabolites in one or more parts of the plants. Agronomic practices for growing Poppy, Isabgol, Ghritkumari, Mandukaparni, Brahmi, Guggul, Mulethi, Senna, Cinchona and a few others have been developed, and there is now localized cultivation of these plants commercially.

The aromatic plants possess odoriferous and volatile substances that occur as essential oils, gum exudate, balsam and oleo-resin in one or more parts like root, wood, bark and foliage. A large quantity of aromatic material of botanical origin is used in cosmetics, toiletries and allied industries.

- Herbs such as Black pepper, Cinnamon, Aloe, Sandalwood, Red Clover are known to heal wounds, sores and boils.
- Tulsi, Fennel, Apple Mint, Golden Oregano, Rosemary can be planted easily in the kitchen garden and many of them act as magnets for bees and butterflies.
- Many medicinal plants are used as blood purifiers and eliminate metabolic toxins; some have antibiotic properties. Turmeric is used in growth inhibition of germs and harmful microbes.
- Some antipyretic herbs like Chirayta, Black pepper, Sandalwood, Safflower are recommended to reduce fever and production of heat caused by this condition.
- Apart from being aromatic, Sandalwood and Cinnamon are great astringents.
- Ginger and Cloves are used in certain cough syrups..
- Few aromatic plants like Barberry, Aloe, Golden Seal are used as mild tonics that reduce toxins in the blood.
- Mint has been viewed as an excellent source to ease an upset stomach and alleviating indigestion, Sarpagandha can be used for curing mental disorders like schizophrenia and high blood pressure.
- Tulsi relieves arthritis, regulates blood pressure.
- Ashwagandha has anti-cancer properties and may reduce symptoms of depression, Mandukaparni is a potent memory enhancer, imparts anti-convulsant, anti-depressant, wound healer and an anti-oxidant.

And not to forget, in the present scenario of this Covid-19 pandemic, Giloy is proving to be very useful as an immunity booster. Many traditional medical practitioners have suggested that it can cure the disease in about 15 days and does not have any side effects in the human body.

Some Notable Examples

Assam is one of the notable homes to a rich and diverse collection of medicinal and aromatic plants. Cottage industries here manage the production of MAP products which have an ever-growing demand especially in the rural areas. The Government Ayurvedic College, Assam Small Scale Industries and SKM Ayurvedic Institute, all three based in Guwahati, Assam are making continued efforts in the processing of MAPs, collecting information about the indigenous knowledge based on these MAPs and creating entrepreneurial opportunities for the rural youth.

Jharkhand has its fair share of indigenous knowledge and an unemployment rate of 8.8% as in July, 2020 (Source: Centre for Monitoring Indian Economy). This combination can be used to trap the indigenous knowledge and provide the unemployed, rural youth with a source of income and livelihood. Bishunpur in Jharkhand has had a fair share of glory since it made an appearance in our prime minister's 'Mann ki baat' speech where the PM clearly appreciated the people for cultivating lemongrass. Bishunpur's success can be turned into a major stepping stone in encouraging MAP cultivation, harvest and processing.

Future Prospects

China beats India as the largest exporter of herbal medicines. China has its Traditional Chinese Medicine (TCM) while India has Ayurveda, Yoga, Unani, Siddha and Homeopathy (AYUSH). In the wake of the Corona pandemic, the world is changing, and so is the outlook of people. People want to change their lifestyles to have better health and better immunity. This changing scenario provides ample opportunity for India to grow its MAP market.

MAP products as medicines and health boosters are actually being used throughout the country. But this sector is highly unorganized. In addition to this lack of organization, there is also a lack of scientific research. To become a part of the national and global market, MAP products and medicines need a systematic marketing strategy with regular research findings published.

The western medicines or allopathic medicines, though are the most popular, have side effects. People, even in the western countries want alternatives and India, through AYUSH

can create a niche for itself not only in the world of medicines but also in the unexplored area lifestyle change.

Phyto-pharmaceutical industries, Patanjali being one of the many, need to be encouraged in order to provide employment and generate livelihood among people. Farmers can be encouraged to take up contract farming of MAP.

The Indian Himalayan region is also an abode to diverse MAP species. The harnessing of their potentials can be a major income generator among people of this region. Similar is the case with regions of western and Eastern Ghats and Nanda Devi region to name a few.

Conclusion

With the on-going campaign of 'vocal for local' stretching out through the length and breadth of the country, it is high time that we recognize the ancient Indian medical solutions and lifestyle. This will not only promote something which is native to India but will also generate employment. The use of MAP also denotes a shift towards more natural and eco-friendly products.

References

Anonymous (2019). Second Advanced Estimate, Ministry of Agriculture and Farmers Welfare.

<https://unemploymentinindia.cmie.com/>

Maiti, S. (2004). Inventory, documentation and status of medicinal plants research in India. *Medicinal Plants Research in Asia*, 1: 79-103.