

KAZI NAZRUL UNIVERSITY

RANIGANJ GIRLS COLLEGE

DEPARTMENT OF MICROBIOLOGY

COURSE NAME: ENVIROMENTAL STUDIES

COURSE CODE: AEE101

TOPIC OF THE PROJECT

"MINT MEDICINAL PLANT"

A PROJECT REPORT

SUBMITTED BY

RUBI MAJI

SEMESTER-1

2021-22

Raniganj Girls' College

Course Name: Environment Studies

Course Code: AEE101

Topic of the project: QUALITATIVE STUDY OF MEDICINAL PLANTS

A Project Report

Submitted by Semester-I students

(Academic Year 2021-22)

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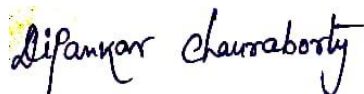
CERTIFICATE

This is to certify that this project titled “QUALITATIVE STUDY OF MEDICINAL PLANTS” submitted by the students for the award of degree of B.A. Honours/ Program is a bonafide record of work carried out under my guidance and supervision.

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Place: Raniganj

Date: 07.03.2022



State Aided College Teacher-II, Department of Geography

Signature of the supervisor with designation and department



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REGISTRATION CERTIFICATE

This is to certify that RUBI MAJI

Son/Daughter of MAHADEB MAJI

of RANIGANJ GIRLS' COLLEGE

is registered as a student of this University,

His/Her registration number is 113211220014 of 2021-22



Registrar

Acknowledgement

I hereby declare that the project work titled "Mint medicinal plant" submitted in partial fulfillment of the requirement of B.Sc in Microbiology is an original work done by us during the year of 2021-2022. No part of this study is either published or submitted elsewhere for any examination.

Date: 7.03.2022

Rubi Maji
Student's Signature

Index

Sl. No.	Contents	Page No.
1.	Acknowledgement	1
2.	Medicinal plant of India	2
3.	Taxonomy	3
4.	uses	4
5.	what is Medicinal plant	5
6.	cultivation	6
7.	Four most commonly cultivated species	7-8
8.	conclusion	9

Medicinal Plants of India:

Mint

Scientific name :	<u>Mentha</u>
English name :	Mint
Kingdom :	Plantae
Order :	Lamiales
Family :	Lamiaceae
Genus :	<u>Mentha L.</u>

Indian names of Mint

- Hindi : Pudina
- Bengali : Pudina
- Gujarati : Pudina
- Kashmiri : Pudyanu
- Malayalam : Puthina
- Marathi : Pudina
- Punjabi : Pudina
- Tamil : Pudina
- Telugu : Pudina
- Urdu : Pudina

Description

Mint are aromatic, almost exclusively perennial herbs. They have wide-spreading underground and over ground stolon's and erect, square, branched stems. The leaves are arranged in opposite pairs, from oblong to lanceolate,

en downy, and with a serrated margin. Leaf colours range from dark green and grey green to purple, blue, and sometimes pale yellow. The flowers are white to purple and are produced in false whorls called verticillate. The corolla is two-lipped with four subequal lobes, the upper lobe usually the largest. The fruit is a nutlet, containing one or four seeds.

Taxonomy

Mentha is a member of the tribe *Mentha* in the subfamily *Lepetoideae*. The tribe contains about 65 genera, and relationships within it remain obscure. Authors have disagreed on the circumscription of *Mentha*. For example *M. cervina* has been placed in *pulegium* and *Preslia*, and *M. cunninghamii* has been placed in *Micromeria*. In 2004 a molecular phylogenetic study indicated that both *M. cervina* and *M. cunninghamii* should be included in *Mentha*. However, *M. cunninghamii* was excluded in a 2007 treatment of the genus.

More than 3,000 names have been published in the genus *Mentha*, at ranks from species to forms, the majority of which are regarded as synonyms or illegitimate events. Seeds from hybrids give rise to variable offspring, which may spread through vegetative propagation. The taxonomy of the genus is made difficult because many species hybridize readily, or are themselves derived from possibly ancient hybridization events. Recent sources recognize between 18 and 24 species.

uses :

Mint is used for flavouring meat, fish, sauces, soups, stews, vinegar, tea, tobacco and cordials.

The mint oil is used for the production of natural menthol, demethylated oil is for flavouring mouth washes, tooth paste and pharmaceutical preparations.

In medicine, it is used against stomach disorders, rheumatism, in ointments for headaches, in cough drops, inhalations etc. The oil and dried plants are antiseptic, carminative, refrigerant, stimulant and diuretic.

Drinks: Mint tea is a soothing drink and a coolant during summers.

Mint bath: steep a handful of mint leaves in a pint of hot water for about ten minutes, then strain. Add to bath water for an invigorating, stress-free soak.

• Ease sunburn pain: Make a strong peppermint tea and refrigerate the mixture for several hours. To use, gently apply to the burned area with cotton pads.

• Scent up a space: Keep your home smelling fresh by adding a few drops of mint essential oils to your favourite unscented cleaner or just take a cotton ball and dab onto a light bulb.

• Most repellent / scented sachet: Tie a few branches of strongly scented mint (peppermint, sage, lavender, rosemary, bee-balm) together, or pull off a handful of leaves, and stuff them into the leg of an old nylon stocking.

What is Medicinal Plant ?

Medicinal plants are plants that have a recognized medical use.

Their use changes the production of mainstream pharmaceutical products to herbal medicine preparations.

Herbal medicine is one of the oldest forms of medical treatment in human history and could be considered one of the forerunners of the modern pharmaceutical trade.

Cultivation

India, it is largely confined to North India in the states of Uttar Pradesh, Punjab and Haryana. Temperate to tropical climate is suited for plant growth. Sunny weather with moderate rain is conducive to its luxuriant growth. A deep soil, rich in humus which can retain moisture, is suitable for mint cultivation.

All mints thrive near pools of water, lakes, rivers and cool moist spots in partial shade. In general, mints tolerate a wide range of conditions, and can also be grown in full sun. Mint grows all year round. They are fast-growing, extending their reach along surfaces through a network of runners.

Due to their speedy growth, one plant of each desired mint, along with a little care, will provide more than enough mint for home use. Some mint species are more invasive than others. Even with the less invasive mints, care should be taken when mixing any mint with any other plant, lest the mint take over. To control mints in an open environment, they should be planted in deep, bottomless containers sunk in the ground, or planted above ground in tubs and barrels.

Some mints can be propagated by seeds, but growth from seed can be an unreliable method for raising mint for two reasons: mint seeds are highly variable one might not end up with what one supposed was planted and some mint varieties are sterile.

is more effective to take and plant cuttings from the runners of healthy mints.

The most common and popular mints for commercial cultivation are pepper mint (*Mentha piperita*), native spearmint (*Mentha spicata*), scotch spearmint (*Mentha gracillise*), and coin mint (*Mentha arvensis*) also (more recently) apple mint (*Mentha suaveolens*).

Mints are supposed to make good companion plants, repelling pests and attracting beneficial ones.

They are susceptible to whitefly and aphids. Harvesting of mint leaves can be done at any time. Fresh leaves should be used immediately or stored up to a few days in plastic bags in a refrigerator. Optionally, leaves can be frozen in ice cube trays. Dried mint leaves should be stored in an airtight container placed in a cool, dark, dry area.

The four most commonly cultivated species are

1 Japanese Mint / Menthol Mint (*M. arvensis*)

- Highly branched and grow up to 1 meter tall
- oil content - 0.5-1%
- Broad ovate leaves
- Presence of glandular hairs on leaves, stem and calyx.

Peppermint (*Mentha piperita*)

- Height of 45-80 cm tall
- oil content is 0.3-0.7%

Spearmint (*Mentha spicata*)

- Perennial herb
- Height of 90cm tall
- Oil content 0.6%
- High carvone content

Bergamot mint (*Mentha citrata*)

- Branching, perennial herb
- 60cm tall
- oil content 0.4-0.5%
- oil emits lemon like smell

Cultivated mint species and their main constituents

Common name	Botanical name	Main constituents of mentha oil
Japanese mint	<i>Mentha arvensis</i>	Menthol (70-80%)
peppermint	<i>M. piperita</i>	Menthol (35-50%)
Bergamot mint	<i>M. citrata</i>	Linalool and linalyl acetate (45%)
spearmint	<i>M. spicata</i>	carvone (60-95%)
scotch spearmint	<i>M. cardiaca</i>	carvone (53-68%)
Garden mint	<i>M. viridis</i>	carvone (very less)



Japanese Mint/Menthol Mint



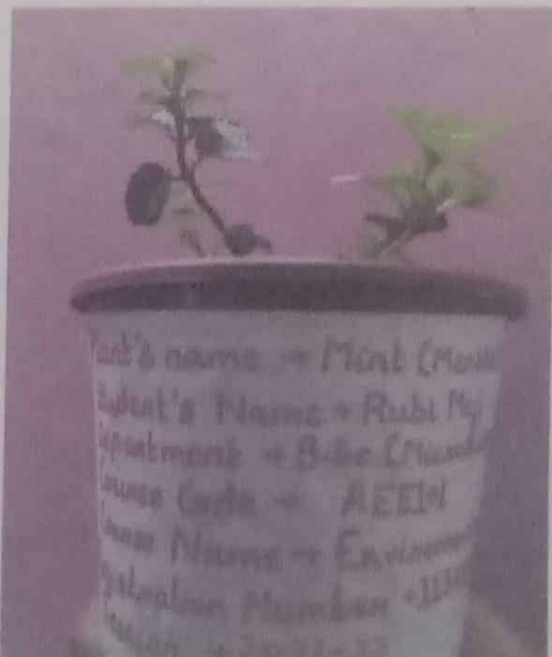
Peppermint



Bergamot Mint



Spearmint



Conclusion

As our lifestyle is now getting techno-savvy, we are moving away from nature. While we cannot escape from nature because we are part of nature. As herbs are natural products they are free from side effects, they are comparatively safe, eco-friendly and locally available. Traditionally there are lot of herbs used for the ailments related to different seasons. There is a need to promote them to save the human lives.

These herbal products are today are the symbol of safety in contrast to the synthetic drugs, that are regarded as unsafe to human being and environment. Although herbs had been prized for their medicinal, flavouring and aromatic qualities for centuries, the synthetic products of the modern age surpassed their importance, for a while. However, the blind dependence on synthetics is over and people are returning to the naturals with hope of safety and security. It's time to promote them globally.

References

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- https://en.m.wikipedia.org/wiki/Medicinal_plants
(Webliography)