

Class -B.Sc. Ag

Semester- 5th

Course Name- Production Technology Of Spices, Medicinal and Aromatic Plants and Spices.

Course Code- BSCAG-313

Topic- D-1, Importance and scope of medicinal, Aromatic and plants and spices..

E-content for odd semester

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It is well known fact that the medicinal and aromatic plants have been major source of natural therapeutic agents since time immemorial. The traditional Indian system of medicine, namely '**Ayurveda**' which involves dispensing of herbal and plant products in various forms such as powders, extracts, decoctions, etc., dates back to the Vedic period, when the first mention of diseases and drugs is found in **Rigveda** and **Yajurveda** (*i.e.*, around 2000 B.C.) and earliest comprehensive description of '**Ayurveda**' is available in the '**Athervaveda**' (*i.e.*, 1600- 1000 B.C.) which contains inter alia descriptions of human anatomy, rudiments of classification of diseases and reference to herbal medicine, plant based products have been in use for medicinal therapeutic or other purposes right from the dawn of history. On the other hand, the traditional remedies of the ancient world were all based on natural products, *e.g.* **morphine** from opium for use as narcotic and analgesic, **latex** excised from the poppy seed for gout, **cocaine** from coca leaf as potential local anesthetic, **ergot**, for obstetric use, **caster oil**, **Senna**, etc. as laxative, **turmeric** as antiseptic, **garlic** for blood and heart remedies, to mention just a few.

Most people are familiar with medicinal and aromatic herbs as food- for example, basil and oregano in sauces, parsley as a garnish. However, for thousands of year many culture around the world have used herbs and plants not just to eat, but to treat illness. Archeological evidence shows that even pre-historic man used medicinal plants to heal. Today the World Health Organization (W.H.O.) estimates that 80% of the world's population uses some forms of herbal medicine.

Many of the drugs now prescribed come from plants that ancient cultures used medicinally. (The word *drug* comes from the old Dutch word *drogge* meaning "to dry", because pharmacists, doctors and ancient healers often dried plants to use as medicines).

Common Allopathic Drugs Made from Medicinal Plants

- **Asprin** : (Salicylic acid) from white Willow bark and meadow sweet plant.
- **Atropine** : Used to treat irregular heart beats from Belladonna leaves.
- **Colchicine** : Used for gout from autumn crocus.
- **Digoxin** : (Lanoxin), the most widely prescribed heart medication- from foxglove, a poisonous plant.
- **Ephedrine** : Use to widen or relax the air ways from the ephedra plants.

- **Morphine and Codeine:** Potent narcotics from opium poppy.
- **Paclitaxel (Taxol) :** Used to treat metastatic ovarian cancer from the yew tree.
- **Quinine:** A drug for Malaria from cinchona bark.
- **Vinblastine: (Velban) and Vincistine (oncovin)** anticancer drug from periwinkle.

Table 1: Medicinal and aromatic plants with High Domestic Potential in India

S.N.	Common Name	Scientific Name
1.	Aonla	<i>Emblica officinalis</i>
2.	Ashwagandha	<i>Withnia somnifera</i>
3.	Aconite	<i>Aconifum ferox</i>
4.	Ashoka	<i>Saraca indica</i>
5.	Arjun	<i>Terminalia aryjuna</i>
6.	Asparagus.	<i>Asparagus racemosa</i>
7.	Brahmi.	<i>Bacopa monnieri</i>
8.	Berberis. <i>Berberis aristata</i>	
9.	Garlic.	<i>Allium sativum</i>
10.	Guduchi.	<i>Tinospora cordifolia</i>
11.	Guggul.	<i>Commiphora wightii</i>
12.	Ginger.	<i>Zingiber officinale</i>
13.	Isabgol.	<i>Plintago ovata</i>
14.	Neem.	<i>Azadirachta indica</i>
15.	Turmeric.	<i>Curcuma longa</i>
16.	Safed Musli.	<i>Chlorophytum borivilianum</i>

References: Modern production technology of Plantation Medicinal Aromatic and Spices Crops, **G.S.Saini.**

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