

ASPECTS OF COLLECTION AND CULTIVATION OF AROMATIC PLANTS AND MEDICINAL PLANTS

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ABSTRACT:

For thousands of years, nature has provided a better environment for our medicinal plants to spread and grow. The medicinal value of plants dates to ancient times and people believes in their safety and economy. Even today, approximately 80% of the world's population turns to alternative medicine for their most important health needs. Plants have many kinds so metabolites that are secondary, also known as plant bioactive components, which are accountable for their pharmaceutical values inside the natural world. scientific farming allows the use of modern methods such as transformation, polyploidy, and hybridization to produce secondary metabolites of plants and their products from the products. Growing, collecting, and storing medicinal herbs requires easy methods to maintain the benefits of organic goods.

The chemical activity is primarily alkaloids found in aromatic and therapeutic plants, glycosides, tannins, resins, essential oils, etc. It is based on various bioactive phytochemicals such as. The Therapeutic plants' growth and development, as well as the secondary metabolites they produce, are generally affected through the actual environment, soil, rainfall, sunshine, and temperature conditions. Geographical and seasonal changes additionally impact the therapeutic and aromatic plant qualities, since the number of bioactive components obtained from natural products may vary.

Keyword: *Planting, harvesting, drying, gathering, growing hormones for plants, and medicinal herbs.*

INTRODUCTION

MEDICINAL PLANTS'SIGNIFICANCE:

Bulk pharmaceuticals entering the pharmaceutical business and the market need to have some important as well valuable ingredients to ensure their therapeutic potential. Breeding can improve the quality of plants, increase the concentration of secondary metabolites, create hybrids that produce special plant products, guarantee the quality of raw materials, and promote industrialization, etc. can encourage. Harvesting harmful chemicals from plants gives better results and provides better treatment. Medicinal plants need a sunny location protected from wind and late winter frosts. For the good development of medicinal and aromatic plants, the soil must be fertile and have the necessary amount of sodium, phosphorus, copper, alloys, organic and other important factors.

Sustainability of agricultural practices has become a global priority. Many active substances are related to soil quality and temporal change.¹ It is known that deep tillage not only affects the physical structure of the soil, but also causes a decrease in organic matter and nutrients. However, the management of organic matter affects agriculture through the chemical, physical, and petroleum characteristics of clay.² The use of organic amendments is widely acknowledged to be promising method to improve soil structure and fertility.³ Increase soil microbial diversity, activity, population, and moisture retention capacity to increase crop yield.⁴

PLANT CULTIVATION:

Commercial demand regarding aromatic and the rapeutic plants is increasing Because of their better results and medicinal uses; so, we require improved medical treatment as well better super vision. If there is not a scientific cultivate on technique, and then the old cultivation ideas should be followed. It is also necessary to seek a method through scientific research. Planting is done according to the needs of the place, with the principles of agriculture, correct cultivation methods and the right environment.

Methods of Prorogation:

Breeding by seed or sexual means:

The process of spreading or sowing seeds in suitable soil is known as sexual propagation in the cultivation of medicinal plants. Seeds can be sown by inserting them in holes or by using the dibbling method, which uses average-sized and weight seeds. E.g., fennel, coriander, etc., or byte broadcasting method and this method is more. In the event of little seeds, applicable. In this technique, the seeds are liberally dispersed over thoroughly prepared soil. As an example, Is poll sesame and linseed. Propagation by Vegetation or Asexual means Growing plants used medicinally through reproduction through sexual relations occurs via dispersing or planting the sprouts in appropriate ground. Sprouts can be propagated through any approach desired. Fennel, coriander, etc. can be grown by using medium sized and weight seeds. It can be planted by placing it in pots or by advertising. Path. This method is better for small seeds. In this way; ready-to-plant seeds such as is poll flax seed and sesame ear sprinkled on the soil.

Prolife ration through sexual means or seed:

For the nonsexual propagation technique, plant-based parts of plants, such as stems or roots, are placed in a medium such as new plants. The advantage of asexual reproduction is that there is no change between the growing plant and the plant it grows from. Fruit seedlings is limited to vegetative propagation (such as raisins, pomegranates, and lemons), plants. Begin to bear fruit before budding, grafting, or seedling trees favors illnesses - resistant different plant varieties, and low-quality variations are ignored. Propagation is done by planting. Plant parts in prepared ground. Vegetative propagation examples include the following: Roots: sea onion, onions Royals: Saffron with colchicum. Tubers in the tub: jalapeños, potatoes Ginger and turmeric are rhizomes. Roots: fresh mint Suction cup: mint, Banana, pineapple.

Affecting factors for cultivation:

Cultivation many fragrant and therapeutic plants require an understanding of the plants behavior as well as the climate conditions for successful development. Factors affecting crop production include soil, altitude, temperature, rainfall and water, fertilizers, pests and diseases and animal management.

1.Soil:

Soil is defined as the earth's layer formed by the erosion of rocks. It is formed by the combination of air chains such as soil, plants, and organisms. The soil must contain the necessary nutrients, organic matter, and organic matter. The soil's water yield, water holding capacity, fertility, and phrase well as optimal soil variables, are adjusted according to the requirements of the selected cultivate treatment. Utilizing compost is very important to obtain high produce from plants with therapeutic properties.

The soil affects sprout germination, the plant's ability to maintain its upright form, the strength and woodiness of the stems, the depth of the plank, and the flower variety of the plank. There are many types of soil for instance, clay loam, cut slit, sandy chalky, sandy loam. The sticky clay is very small. They match very well so there is little to no gap. These are as are heavily flooded. Therefore, clay soil will get wet very quickly. There is not much air in this soil; therefore, vegetation on these soils is not prepared to take in moisture. This type of the soil is known as "physiologically dry soil." Sand grain dimensions (0.02-02 mm). They leave behind big pores that are incapable of retaining water due to capillary action. Most water moves swiftly. And penetrates

far down in the ground. Therefore, the roots grow and extend a good depth. Sandy soil deficient in nutrients; Because of its lower fertility and lower level of dryness for plants. Mass Loam It has a blend of silt and clay. It's very useful for cultivation. It is efficient and provides sufficient nutrients for the body and is dedicated to the development of plants. It has the capacity to contain high water. plant planted within this soil grow quickly as well very slowly. Alluvial soil Alluvial soil is considered the most fertile soil because it contains more organic matter other than soils. Sandy loam it is a blend of clay and clay.

2.Humidity, Temperature, and Altitude:

Temperature, precipitation, and day length are examples of climate factors that have an impact on the physical, chemical, and biological properties of medicinal plants. The metabolic activities of plants are also influenced by sun time, average rainfall, average temperature, and variation sun day and night time temperatures.

3.Rain falls and Irrigation:

Rain and Watering Most plants require good water or adequate rain to support their expansion and progress. Drainage and irrigation ought to be monitored as well as controlled according to the needs of a group of herbs at different stages. Water used for drinking water must comply with local, national, regional, or both kinds of standards. Care ought to be taken to ensure the fact that medicinal plant has adequate water. Aloe vera and acacia are examples of xerophytic plants that do not require water or rain, giving the advantage of growing this medicinal plant.

4.Fertilizer

Manure is a mixture of organic and inorganic substances that increases the fertility of the soil. There are many types of fertilizers. Biogenic Fertilizers Soil generally does not contain fertile organic matter and nitrogenous substances. This chemical can only be used as a fertilizer fit can provide the necessary nutrients. Green Leaf Fertilizer is a useful material in combination with clay. Those provide majority of the important nutrients needed for plant healing. This results in an increase in crop production Farm The mixture of manure and animal waste as well unused waste materials, including straw and plant stems that are fed to livestock. Compound fertilizer This involves mixing slowly and without the use of plant and animal ingredients. Green fertilizer This fertilizer is for non-wood products, it is applied by mixing with the soil, but it is still compatible with the soil. Fertilizer plants generally grow quickly. This soil's organic and nitrogen content is well-balanced. Together they form as against the soil Controlling erosion and natural processes. In this way, the quality of the plant will rise between 30 and 50%.

5.Plant bioactive compounds:

From Drug Discovery to Product Development Bio fertilizers is an extension of the biological products of bacteria, algae and fungi that help distribute nutrients when incorporated into the ground. Important ones include Nitrogen-fixing creatures. Several bio fertilizers Symbiotic bacteria, Azolla-Anabaena mutualisms, non-symbiotic microorganisms, non-symbiotic nitrogen-regulating biological organisms, eubacteria are cyanobacteria, heterogeneous groups Prokaryotic biology, mainly nitrogen phosphorylation. Phosphorus, Macronutrient included potassium, calcium, magnesium, and sulfur; micronutrients include iron, manganese, zinc, boron, copper, molybdenum, carbon, and oxygen.

Pests and Pests Control:

A pest is a undesirable insecticides and plants, respectively, are derive insecticides and plants, respectively, are products and are effective against small pests. Many insect species can carry grave illnesses include typhus and malaria. Certain insects have the power to completely kill or severely harm priceless crops like corn and cotton., wheat, and rice. Additional pests consist of insects, yellow mice, as well plants like ragweed and Toxicodendron radicans. Understanding the origin of a pest is important for the development and

implementation of pest management strategies that include components of the origin. Globally, synthetic pesticides represent a large market, and most synthetic pesticides are used in agriculture or other applications.

Pest Management:

a. Natural Control:

Nature is full of examples of prey-predator coexistence. The growth of all pests is in habited to some extent by other animals. Intestinal, animal and insect-borne diseases are often the most important aspects of pest control. Since the use of special pesticides against major pests in crops may cause serious damage to small insects due to the destruction of natural enemies, this will lead to the deterioration of the loss-profit balance. Lines The most important effects of Insects are also affected by seasonal variation sin temperature and cold weather, precipitation, soil, air humidity, and other environmental conditions. Funny people. waver, pests are released due to the beautiful climate and cold climate, especially in the tropics. The path is usually adjusted according to the surrounding area.

b. Artificial control:

People began to control pests. Control of artificial products can be divided into agricultural, chemical, and chemical as stated below. The machine is like an inspection machine. Uses self-service as well as mechanical equipment to collect or eliminate pests. Skills such as hand picking, pruning, trapping, and burning are used to destroy eggs, larvae, pupae, and adults.

c. Agricultural Control:

Agricultural control strategies are out of date. Deep planting, planting, or changing the environment to eliminate weeds and insects early can affect the life span of the pest. Today's modern plant breeding technology such as combining good genes, controlling the mutation of the haploid chromo some, plants with more than two pairs of homologous chromosomes and the biotechnology rebellion are widely used Production of pest-resistant taxa.

d. Chemical Control:

Chemical synthetic elements are used for pest control in many pesticides worldwide. This type of pesticide is used to kill pests and protect plants, animals, or other organisms that are resistant to pets. Pesticides, disinfectants, fumigants, and other chemicals are used to kill insects, ticks, and microbes that use isotopes or disinfectants. A new group of chemicals called Insect Growth Regulators (IGR) Pesticides or biopesticides contain natural materials that are already present in insects and control their growth. One such hormone is 1-methyl (E, E)-11methoxy-3,7,11-trimethyl 2,4dodecadienoate, which is also marketed under the names Altoist, ZR-515, and Minex. It is a cocoon formation phase and enables it to turn into an adult. Thanks to this method, the larvae multiply over time and die. These types of biopesticides give the best result.

ROLE OF PLANTS GROWTH REGULATOR

The growth and maturation stages of medicinal plants are controlled by various compounds called plant growth hormones. Five specific herbal remedies are widely accepted; these are Adenine-based substances called Cytokines, compounds with an aromatic ring and carboxylic acid group, gibberellins (tetra cyclic diterpene acids, most terpenoids compounds in plastids), abscise acid and its derivatives, as well as ethylene. These are compounds spread all over the world and are found especially in more advanced plants. controllers of plant growth are unique in their ability to flexibly synchronize cell growth, biological activity, cellular differentiation, organogenesis, senescence, and dormancy at very low levels. Their actions will be continuous. The different hormones involved in flower production and reproduction have not yet been identified, but

hypotheses have been put forward. Although the first one is devoted to the analysis of the development of hormones used in medicinal plants.

1)Auxin:

Auxin is a generic word for materials that facilitate coleoptiles tissue elongation. The earliest research on auxin was done in 1928 by Dutch botanist Frits War milt and other Dutch colleagues. Human urine and grain are the sources of the two growth-regulating chemicals, auxin-a and auxin-b. Subsequently, they discovered that they shared characteristics with indole-3-acetic acid (IAA), which is currently regarded as a significant auxin. Numerous natural compounds, including indole Acetaldehyde, indole Acetonitrile, and indole pyruvic acid derived from various plant sprays, have been found as potential precursors to indole Acetic acid. Tryptophan, an amino acid that is present in plants, is the source of all these compounds as well as IAA.

2)Gibberellin:

There are currently more than 50 identified gibberellins, which belong to a class of endogenous plant growth regulators. Japanese scientists identified this plant development regulating families in rice in 1926. Then Yakutia and Hayashi separated the crystal structure of the substance called “gibberellin”. Many gibberellins have been identified by plants and plant regulators GA2 and GA3, now called gibberellic acid-1 (GA-1), are considered the main gibberellins. The main plausible indicator is the presence of gibberellins sin higher plants in West and Phinney. Macrocarpa), especially in products with gibberellin-like effects.

3)Cytokinins:

Zeatin and kinetin are examples of natural and artificial cytokinins that exhibit notable growth. Their primary distinction between auxins and gibberellins is their involvement in processes related to cell development and expansion. Different substances with distinct biological purposes are called cytokinins. In 1913, German plant researcher focused on the presence of tissue-soluble substances that promote biological effects in damaged potato parenchyma.

4)Abscisic:

Plants naturally produce abscisic acid, which inhibits growth and influences dormancy, seed formation, and flower bud opening. Abscisic acid is one such substance (2Z,4E)-5-[(1S) The basic form of 1-hydroxy-2,6,6-trimethyl-4-oxocyclohexane-2-ene In1965, a model of-3-methylpenta-2,4-dienoicacid was created. Ctenophoresroseolaisa fungus from which abscisic acid is extracted.⁶ Carotenoids and abscisic acid (ABA) have similar structures, which motivates research into the connections between the set wo classes of molecules. Severallutein's, particularly violaxanthin (a natural orange lutein pigment biosynthesized from zeaxanthin viaepoxidation), have now been found to produce inhibitors when exposed to sunlight. It is now accepted that ABA comes from the indirect ‘carotenoid’ channel; Similar precursors before cleavage are Ninety-cis violaxanthinandninty-cisneoxanthin, whichcontainmorethanelevencleavages. Two 12 (11', 12') bonds produce flavin, which is ready to be converted into ABA in the tissue.⁶

5)Ethylene:

Ethylene was studied in ancient times to stimulate growth responses, and in 1932 ethylene released from stored apples was found to inhibit the growth of surrounding potato buds. It plays a role in the ripening of fruits. Ethylene is biosynthesized in plants as S-adenosyl methionine through the intermediary1-aminocyclopropane-1-carboxylicacid (ACC). Genetically, the ACC synthase gene is related to squash and tomato.⁸ During leaf abscission and fruit formation, ethylene plays a biological role by initiating de novo synthesis and releasing the same cell wallytic enzymes as cellulose. It decomposes into ethylene and phosphate when pH is above 4.0 in the cellular fluid, and even small amount so ethylene have been shown to increase the glycoside concentration in Ocasio.

Other Growth Regulators:

Apart from the widely recognized substances that hinder and regulate plant growth, numerous additional chemicals that could impact plants have been isolated from their natural environments. There are those that are global in scope and others that are more specialized. As a result, these substances have significant effects, particularly in growth regulation. Alkaloid nitrogen-containing compounds, volatile unsaturated terpenoids, salicylates, polyamines, phenolic and natural compounds, and aromatic and aliphatic carboxylic acids are among the chemicals. hydrocarbons. Aceraceae's flag sugar is the source of many sesquiterpenes, a family of three isoprene units with a side chain composed of Canadian, Cochrane, and eudemon that prevent lettuce seeds from germinating.⁹ Brassinosteroids are a new class of polyhydroxylated steroidal plant hormones that mimic the structural make up level.

1.Organic Farming:

Farming using organic methods increases plant survival without the use of chemical controls. Organic farming improves soil composition and balances soil organisms. Terms and conditions of the Organic farming, according to the International Federation of Organic Agriculture Movements (IFOAM, 2007), sacrificial and wild cropping systems. The cycle and stability of nature must be restored and the homeland, ecology, ecology, Cultural law and scale, (3) Soil balance of efficiency, (4) material and energy load that must be managed with new methods, recycling and systems in order to improve environmental quality and protect the natural heritage, (5) ensure a good standard of living for all people concerned and provide recommendations on the management of food and the reduction of consumption,(6)Agriculture. experts can improve planning and quality improvement.

2.Collection of Medicinal Plant:

Regardless of the type of drug and site of collection, there is no way to determine which drug is suitable for collection when it has the highest amount of plant secondary metabolites. The collection of medicinal plants is influenced by many important factors: the climate in which the plants were collected, the age of the plants, the hours used each day Sunlight, wind, and physical development. The level of the plant was used.¹² Harvesting affects the quality and quantity of active ingredients in the plant: The weather in which the plant is harvested, such as edible mint leaves, eucalyptus, commercial crops, and spearmint leaves. The essential oil content used in memory enhancement is higher. In spring, in hot and cold weather, the content of this oil decreases. For example, the ancient plant of the cinchona tree, which belongs to the Rubiaceae family, contains many alkaloids Cinchonine and quinine, a medication used to treat beriberi and malaria, an antibiotic found in the bark tree, which has similar properties to cinchonine. About 6to9 years. Physiological growth stages of medicinal plants: for example (digital, tobacco and senna) cumin (*Nigella sativa*) are written in white and black in color.

There are currently between 50,000 and 70,000 plant species used in traditional or traditional medicine, many of which are still being investigated for their medicinal potential. Plants have been used as medicine for thousands of years, and evidence of their use dates to 60,000BC. According to the World Health Organization, 80% of people today in developing countries rely on traditional medicine, mostly based on phytotherapy, for their important medical needs. With the increase in drug prices and increasing interest in polycentric lifestyle, the medicinal use of plants has also attracted attention. The plant can be used directly from one or more sources or can serve as a model for synthetic ingredients in Western countries. There are at least 25,000 plant species in the Mediterranean region and more than half of the medicinal plants in the world. North Africa is a region with the richest, oldest, and most diverse medicinal plants, many of which have economic benefits that cannot be ignored. Although most of it is collected from wild animals, the natural environment of the region is also suitable for large-scale agriculture.

3.THREATS TO THE PRACTICE:

Although important to many people, some medicinal plants are threatened with death. They are often associated with aromatic plants and are often “non-woody food sources” (NWFP), such as mushrooms or nuts, which face the same extinction pressure. One of the threats to medicinal plants is over exploitation, but habitat loss and degradation due to intensive use and climate change are also important. This also expresses the belief in inexhaustible plant resources and high economic needs. As a result, at least one-fifth of North Africa’s fresh water-using plants are at risk of extinction. Similarly, approximately 100 species on the European Red List of Vascular Plants are known to have medicinal properties, and overall, approximately 15,000 medicinal and aromatic species worldwide are known to be under some threat. In addition, Medicinal plants are often collected in the wild without control and regulation, allowing the black market to flourish. Planting may be a solution to combat overharvesting, but can also lead to environmental damage, loss of genetic diversity and reduced interest in wild life conservation. Despite the important role they play for many people, these plants still face a conservation gap, mainly due to a lack of public awareness. Knowledge of the medicinal properties of plants is often shared among local people but is rarely documented or easily accessible. Therefore, threatened plants may not be the best fit for conservation efforts. Moreover, unlike crops or high-value crops, not many genes are stored in gene banks.

4.RECOGNITION AND FUNDING:

Medicinal plants are still widely used in many parts of the world and are the target of increasing demand for daily use by people who want to live more or more cheaply in Western countries. Over the past 50 years, various programs have been established to collecting formation and use conservation protections for these species.

In 1978, the World Health Organization initiated a study to overcome regional differences, resulting in the identification of 20,000 medicinal plant species. To complete the partial experience, IUCN and WWF published a discussion on Priorities and Recommendations for the Conservation of Medicinal Plants in 1988. They develop plant protection programs targeting plants with economic value, giving priority to medicinal and aromatic substances for the World Health Organization. The Association for the Preservation of Nature International, founded in 2004, has also been effective in raising awareness about the threats posed by these plants and the importance of protecting them. Medicinal plants, including aromatic species and non-wood forest products, have also benefited from the recognition of their economic value. The Innovation Network for Cork, Resin and Edible Products (INCREDIBLE) was founded in 2017 to facilitate knowledge sharing and help local actors create fair trade through social and environmental practices. Aromatic and medicinal.

Plants are important elements for business. However, the production of drugs on a large scale maybe difficult because the pharmaceutical industry in Western countries will also find it more profitable to discover or develop new drugs rather than focusing on traditional medicine.

Aromatic Plants:

1.Rosemary:

The colorful flowers of rosemary emit a pleasant aroma that takes you into a sea of beauty and mist. Its needle-like leaves not only add flavour to your food, but also make a nice garnish. Rosemary loves the sun and thrives in well-drained soil where it can produce beautiful flowers. Rosemary belongs to the mint family and is often used in perfumes and aromatherapy for its woody aroma that calms the senses and brings peace of mind. Perfect for those who want to come home and have a quiet evening to relieve long stress.



Fig.1: Rosemary

2.Oregano:

An essential part of Italian cuisine, thyme bring swarm, earthy aroma that delights your taste buds and its scent will not only enhance your food but also your mood. Thyme is a fragrant plant with fascinatingly beautiful flowers that bloom in red and white clusters. Thyme, which comes from the mint family, can turn your home garden into a more beautiful place with little care, even on the hottest days.



Fig. 2: Oregano

3.Lemon Basil:

If you are a potpourri lover and love the scent of lemon, a beautiful lemon basil plant would be a perfect addition. Its leaves are similar to basil and it is a delicious herb because it combines lemon and basil extracts perfectly and also makes a good dish. Lemon Basil is a beautiful herb that can be easily prepared at home or brewed as tea, with it relaxing effect and pleasant aroma. You can crush the leaves and squeeze the juice and use them to make candles or make a body bath.



Fig. 3.: Lemon Basil

Harvesting Plants Used for Medicine:

Harvesting is a crucial process activity in agriculture because it indicates the commercialization of medicinal products. An important point that should not be forgotten here is the type of medicine to be prescribed and the quality of it. Herbs should be harvested in good weather or during work to ensure that the composition of the herbal product and the final herbal product meet the most basic standards. Harvest times are determined according to the natural materials used. Detailed information on suitable harvest times is usually found in national pharmacopoeias, published fact sheets, new publications and reference books. However, the model, or stage at which the plant is growing, determines the amount of bioactive phytochemicals present. The most appropriate harvest time should be determined according to the standard value of biological products, not the total nutritional value of the plant targeted for treatment. Please note that when harvesting plant material should not be mixed with unwanted material, weeds or poisonous plants.¹³ Plants should be collected in the most suitable condition for spraying, Outside the combination, rain or witness is not good. Cutting tools, cutting machines and other equipments hold is properly cleaned and handled top revent contamination from soil and other equipment. Harvested herbal plants should be moved to a good, faded place. Harvested plant scan be transferred to clean containers, dry bags, caravans, bunkers or different containers and sent to work equipment. All containers used during harvesting must be clean and free of foreign matter resulting from collisions of herbs and other diseases. When no longer in use, containers should be in a dry place and in an area protected from insects, mice, birds and other pests. Avoid damaging machinery or equipment stressed by overload. Plant materials should be known and destroyed at harvest, inspected after harvest, and handled to prevent microbial contamination and spoilage of plant products. It is necessary to adopt some medicinal herbs and well-known medicines and perfumes to cure money.^{14,15}

Drying Herbal Medicinal Plants:

Drying is very important that the product is used correctly before it enters the market. Drying is a step in preserving our medicines and their benefits for a long time. Help us choose more appropriate activities to do, depending on the medical history and medicinal properties of the animal or plant. Removing enough moisture from the drug and preserving its structure and quality is also important in drying, and this step also does not allow bacteria to grow. Drying facilitates crushing and grinding according to the need of the finished product and inhibits some enzymes. There are specific processes that must be followed for some medicines to be effective, such as the fermentation of Ceylon cinnamon bark and gentian root.¹⁶ To improve drying, cut and cut into small pieces such as *Glycyrrhiza glabra*, *Drumian maritima* and *Jatrorrhizine palmita*. In order to maintain

their color and oil content, flowers are dried in the shade. Drying can be done in two different ways: naturally or artificially.

Organic Desiccation:

You can use either direct sunlight or shade for natural drying. We generally prefer cold and dry because it helps preserve the natural color of the plant (such as digitalis, lilac, senna) and its negative characteristics (such as mint).

We can also dry the medicine directly (such as gum Arabic, seeds and fruits) if the medicine is stable at high temperature.

Artificial Drying:

Artificial drying, if we use oven, for example a dryer, a vacuum cleaner, and a Spray dryer.

Dish dryer:

The product is dried in a dish drier if it doesn't include essential oil, is heat resistant, or needs the enzymes to be weakened. Herbs like dried gum, belladonna root, cinchona bark, tea and raspberry leaves, and hot air at a particular temperature are simpler to eliminate moisture content from when they are in a drying container.

Vacuum drying:

Tannin sand digital is leaves are sensitive to higher temperatures, so they are vacuum dried.

Spray Drying:

Spray drying is used to dry two compounds that are extremely resistant to temperature changes and climatic conditions. This technique was used to dry tannins, pectin, and papaya latex.¹³

Medicinal Product Garbling:

Gargling is the next step in the process of making the crude medicine that is sold once it has dried. In this manner, the raw medication is isolated from foreign material including sand, mud, and alien organic substances. The crude drug does not comply with pharmacopoeia restrictions if the drug surfer is fine and is probably allowed if it does not act on the drug. More than just stems when it comes to herbs. Rhizomes of medicinal plants need to be carefully removed from the stem and roots, and remove the metal at the base of the stem with a magnet.

Packaging of Medicinal products:

Good plant materials should be packaged promptly to prevent gradation of harmful substances, prevent excessive microbial contamination and multiple sources of contamination. Continuous measures must be taken throughout the permitting process to eliminate bad products, bad bacteria, and bad products before and throughout the final stage of packaging. Completed plant materials should be clean, dry, packed in trunk or individual containers according to requirements, manufacturers and end-user requirements, and regulations in the country and/or region. The medicinal product must be clean, dry, and free of contamination. Plant materials that are delicate should be kept in rigid containers.¹² These consumers must, however, arrange the packaging that is utilized Recyclable packaging materials such as jute bags and mesh bags should be washed (sterilized) and dried completely before reprocessing, thus preventing the formation of foreign matter (drug) from previous drug products. All containers should be stored in a dry and clean place, free from pests. To avoid disputes, the packaging of herbal medicinal products should be written clearly indicating the name of the plant, its biology, plant sample, place of distribution, date, name of the plant, author, process, and numbers. Basing additional registration and approval of its structure on various national and/or regional standards will increase the value of medicinal plants. Regulatory information should not be affected by batch packaging and may include brand name, country of origin, batch size, quality, variety, and date. Information must be stored in accordance with the laws and regulations of the country and the laws of international and regional organizations.

Storage and preservation of Medicinal Plants:

Storing medicine on a large scale can be a huge task. However, Buck thorn bark produces a noise when stored for a long time, which often cannot be avoided; Like the cannabis plant and sarsaparilla, its poils even when handled too tightly. Research data showed Paclitaxel content in yew tree leaves and extract increased After hot competition for a maximum of one year Even when kept in intensely dark, direct sunlight, Paclitaxel content in yew tree leaves extract It can also be reduced by 30-40%.¹⁶ Similarly, the lipo phelical amides of Echinacea orientalism, the most popular anti-inflammatory drug, rapidly degrade during storage. Drying has been reported to have When compared to drugs stored in frequently used containers (sacks, bales, wooden boxes), storage for 64 weeks at 24°C can yield 80% moisture with little influence on the alkyl amine. Boxes, cartons, and envelopes – approximately % moisture It reabsorbs 10-12 of them. Starch, acacia gum etc. It must have humidity control according to BP standards and the European Pharmacopoeia. Attention should be paid to humidity, as well as the relationship between temperature, humidity, and the condensation of water when the temperature drops. Medicines like digitalis and the cannabis plant Will lose some of their effectiveness if we dry them. Store these air tight containers with a dehydrator. Originally planted medicinal plants should be preserved and planted individually or to ensure uniformity. Adequate safety measures should be taken to protect and replace poisonous or deadly plants.

CONCLUSION

The cultural value of therapeutic plants may be a dispute in assistance of preserving diversity. However, this culture is not the same for wild and cultivated animals and must be distinguished from culture, which involves the use of plants and the benefits of cultural practices associated with plants. Medical plants and their sources are used as raw materials by traditional and Ayurvedic doctors to make a variety of medical remedies. Scientific evidence of herbal and aromatic herbal preparations has not yet evolved while creating contemporary medicine. Conventional methods are mostly used in the production and operation of herbal medicine, but innovation is still limited. A special project can be done to get to know some herbal medicines that are quite popular in the cosmetic, nutraceutical, food, and pharmaceutical industries. Such ideas will bring great profit to farmers in growing medicinal and aromatic products. Growing, collecting, and processing medicinal plants is important for today's Chinese herbal medicine industry to restore quality, value, and medicinal value to humanity

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