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## **WILD EDIBLE PLANTS OF SEWA CATCHMENT AREA IN NORTHWEST HIMALAYA**

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**Abstract:** The food habit of people has developed on the basis of experience and survival through successive generation. Primal man learnt that certain nuts, fruits, berries, leaves, roots, grains, mushrooms etc. could cause many ailments and even death. Presently they are thoroughly acquainted with the methods of excluding the harmful floristic elements growing in the wild. In view of the population in general and remote, hilly and inaccessible terrain in particular, wild edible plants of the Sewa catchment area has been surveyed. Extensive field survey has brought to light more than ninety plant species are used as edible. The paper discusses various categories of wild edible plants used by local inhabitants in different climatic regions of catchment area.

**Key words:** Edible plants, Northwest Himalaya, Sewa catchment

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## **AN EVALUATION OF TRADITIONAL KNOWLEDGE BASED STUDIES IN UTTAR PRADESH AND UTTARAKHAND**

**Lokendra Singh, Preeti Vats and Ranjana**

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**Abstract:** Dwindling ethnicity in states in question and renaissance of traditional knowledge and phytotherapy especially in AYUSH systems of alternative medicine have prompted the authors to document the present scenario of traditional knowledge for the benefit of new researchers and technothirsty Herbalists because despite recognition of 175 medicinal species in Uttarakhand alone, there remains untapped reservoir of various phytochemicals awaiting intensive investigation for their biological activity based on existing pool of traditional knowledge which is being documented in present communication.

**Key words:** Traditional Knowledge, Medicine

## NOMENCLATRURAL CHANGES IN THE PTERIDOPHYTIC FLORA OF UPPER GANGETIC PLAIN

**Y.P.S. Pangtey, Lalit M. Tewari and Kanchan Upreti**

*Department of Botany, D.S.B.Campus, Kumaun University, Nainital-263 002, Uttarakhand*

**Abstract:** This papers deals with the nomenclatural changes of some ferns and fern-allies in the *Pteridophytic Flora of Upper Gangetic Plain*.

**Key words:** Nomenclature, Pteridophytic Flora, Upper Gangetic Plain.

## COMPATIBILITY OF BIO-CONTROL AGENT *TRICHODERMA VIRIDE* WITH SOME PESTICIDES

**M. Kumar, Munesh\*, D.K. Sharma\*\*, A.K. Sharma\*\*\* and P.K. Sharma**

*Department of Microbiology, J. V. College, Baraut (Baghpat)-250 611*

**Abstract:** The effect of seven commercial pesticides, Bavistin 50% W.P., Vitavax 75% W.P., Captan 50% W.P., (Fungicides), Chloropyriphos 20 E.C., Monocrotophos 20 E.C., Thimet 10 G (Insecticides), 2,4-D 80% W.P. (Weedicide), in 1000 ppm, 100 ppm, 10 ppm and 1 ppm was studied on growth of *Trichoderma viride* by poisoned food technique. The above commercial formulations exhibited varying effects on growth of fungus ranging from inhibitory or neutral, antispoulant to stimulatory. Captan, Monocrotophos and lower doses of Vitavax, Chloropyriphos and Phorate can be used in combination with *Trichoderma viride* in IDM of selected pathogen.

**Key words:** *Trichoderma viride*, compatibility, pesticides.

## QUANTITATIVE ANALYSIS OF MICROBIAL COMMUNITIES IN A TYPICAL PHARMACEUTICAL WATER SYSTEM ON BASIS OF CONVENTIONAL CULTURE METHOD

**P.K. Sharma, M. Kumar, A. Garg\*, V. Dhaka and D.K. Sharma\*\***

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**Abstract:** Bacterial contamination of the water supply of newly installed water system unit was investigated. Water samples were collected at different sites from water supply lines to the final utility area. Within hours following connection and continuing for up to several months of the study, water samples were obtained from the air-water syringe of the Unit. The samples were plated on culture media for quantitative analysis. The Total Viable Count

procedure involved incubation of sampled water in aerobic conditions and does not allow estimation of anaerobic microbes. Direct pour plate method and subsequently membrane filtration technique was followed to estimate the microbial load. Finally a comparative analysis of microbial load on different steps was made. However the system was found to be useful monitoring the microbial load.

**Key words:** Microbial load, Total Viable Count, Water system.

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## **SEED GERMINATION TRIALS AND SEEDLING DEVELOPMENT IN INDIAN AMLA PLANT, *EMBLICA OFFICINALIS*.**

**S.K. Srivastava**

*Department of Botany, Meerut College, Meerut.*

**Abstract:** Indian Amla or Gooseberry plant or Emblic myrobalan, *Embllica officinalis* Gaertn, belonging to family Euphorbiaceae (Duthie, 1960), grows as trees upto 10 meters height.

**Key words:** Seed Germination, Amla

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## **ON THE GENUS *RHIZOPUS* IN INDIA**

**Arvind Upadhyay and M.U. Charaya**

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**Abstract:** Indian fungal records recognize eighteen taxa of *Rhizopus* as species and varieties. In the light of the presently prevailing international treatment of the genus, ten taxa of *Rhizopus* need to be recognised as far as Indian records are concerned. These are: 1.*R. arrhizus* Fisch. var. *arrhizus*; 2.*R. homothallicus* Hesselt. & J.J. Ellis; 3.*R. microsporus* var. *chinensis* (Saito) Schipper & Stalpers; 4.*Microsporus* var. *microsporus* Tiegh; 5.*R. microsporus* var. *rhizopodiformis* (Cohn) Schipper & Stalpers; 6.*R. nigricans* var. *minor* Jensen; 7.*R. nigricans* var. *minutus* Chaudhuri & Sachar; 8.*R. niveus* M. Yamaz; 9.*R. sexualis* (G. Sm.) Callen; 10.*R. stolonifer* (Ehrenb.) Vuill.

**Key words:** Indian fungal records, *Rhizopus*.

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## **RESPONSE OF VARIOUS PHYSICO-CHEMICAL TREATMENTS ON PHYSIOLOGICAL ATTRIBUTING CHARACTERS IN MANGO (*MANGIFERA INDICA* L.) CV. AMRAPALI**

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**Abstract:** An experiment was laid out in Post-Harvest Laboratory, department of horticulture, SVBPUAT, Meerut to assess the effect of various physico-chemical treatments on various physiological attributing characters in mango (*Mangifera indica* L.) cv. Amrapali. The experiment was conducted in CRD with fourteen treatments and three replications. Out of these, ethrel 750 ppm treated fruits showed better results followed by ethrel 500 ppm. The pedicellate fruits and ethrel+bavistin (750+1000 ppm) were also found to be significantly superior over control in respect of fruit skin colour, flavour/aroma, organoleptic taste and fruit marketability. Based on results of this study, it can be concluded that ethrel 750 ppm was found to be the most suitable treatment in improving physiological traits i.e. fruit skin colour, flavour/aroma, organoleptic taste and fruit marketability.

**Key words:** Amrapali, Fruit marketability, Fruit skin colour, Flavour/aroma, Organoleptic taste, Physical and Chemical treatments.

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## **ETHNOMEDICINAL PLANTS USED FOR JAUNDICE IN KANGRA DISTRICT (HIMACHAL PRADESH)**

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**Abstract:** The paper reports on ethnomedicinal plants used by the native people of Kangra district of Himachal Pradesh in the treatment of Jaundice.

**Key words:** Ethnomedicinal plants, Jaundice, Kangra district.

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## **TREE SPECIES COMPOSITION, REGENERATION AND DIVERSITY STATUS OF MISCELLANEOUS FOREST IN TARAI REGION OF KUMAON HIMALAYA**

**R. Chandra**

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**Abstract:** The study deals with the tree species composition, regeneration status and plant diversity of miscellaneous forest in tarai region of Kumaon Himalaya. The total tree basal area ranged from 2325.0 to 2974.7 cm<sup>2</sup> and density from 4.7 to 7.0 plants 100m<sup>-2</sup> for tree layer, 8.0 to 18.4 individuals 100m<sup>-2</sup> for saplings and 58.8 to 146.3 individuals 100m<sup>-2</sup> for seedlings. Shannon-Wiener Index (diversity) values for tree layer ranged 2.408 to

2.862, concentration of dominance ranged 0.163 to 0.205 and equitability between 8.58 and 11.23. On the basis of data on population structure, a total of four patterns were recognized, *Mallotus philipinensis*, showed expanding population structure. Absence of lower girth classes of *Dalbergia sissoo* indicates that this early successional species is failing to regenerate with increasing density of forest cover. *Tectona grandis*, *Cassia fistula* were represented only by seedlings indicating they have invaded recently. Rest of the species exhibit accidental population structure.

**Key words:** Tree, Composition, Regeneration, Kumaon Himalaya

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## **DORMANCY IN GLADIOLUS: THE CAUSE AND REMEDY– A REVIEW**

**Sunil Malik, Mukesh Kumar and Manoj Kumar Singh**

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**Abstract:** Gladiolus ranks second in area and production of cut flowers grown in India. Dormancy of corms and cormels is one of the major hindrances in the commercial cultivation of gladiolus. The physiological basis of corm and cormel dormancy has been ascribed to the accumulation of growth inhibiting substances, especially abscisic acid (ABA). Cold storage of corms at 4-5°C for 3-4 months is the widely followed practice for breaking the dormancy, which restricts their use to only one season i.e., winter. Considerable work has been done on breaking dormancy in corms and cormels. Effective chemical treatments need to be standardized irrespective of the variety, location and environment.

**Key words:** ABA, Corm, Dormancy, Gladiolus, Thiourea.

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## **EFFECT OF LEAD NITRATE-PB (NO<sub>3</sub>)<sub>2</sub> ON PLANT NUTRITION, AS WELL AS PHYSICAL AND CHEMICAL PARAMETERS ON LOBIA (VIGNA UNGUICULATA LINN. WALP.)**

**Pracheta, Manisha and Lokendra Singh**

*Department of Biotechnology, M.I.E.T., Meerut and Doon (PG) Paramedical College, Dehradun.*

**Abstract:** Lead is a major pollutant in both terrestrial and aquatic ecosystem wherein it may adversely affect the faunal and floral health. When accumulated in plants, it is necessary to know the tolerance to lead by plants/parts and Pb-detoxification, phytoremediation and rhizofiltration in polluted soils is the remedy. In the present communication, the effect of lead nitrate on the growth, biomass and plant nutrition of lobiya has been reported and tolerance dose of plants have been found.

**Key words:** Lobia, Lead Nitrate, Plant Nutrition

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## **FLORA OF JHAJJAR DISTRICT, HARYANA**

**Jai Bhagwan Singh**

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**Abstract:** The present work comprises of 731 species belonging to 459 genera and 114 families of Angiosperms. Of these 611 species under 371 genera and 93 families belong to Dicotyledones and 120 species under 88 genera and 21 families belong to monocotyledones. The ratio of families belonging to monocots and dicots were 1:4.46; of genera 1:4.21 and of species 1:5.09. The ratio of genus to species is 1:1.64.

**Key words:** Family, Flora, Genus, Jhajjar district.

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## **SOME RECENT ADDITIONS TO THE FERN FLORA OF THE WEST HIMALAYA-I**

**Y.P.S. Pangtey, Lalit M. Tewari and Kanchan Upreti**

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**Abstract:** In the present paper, a list of recently recorded fern species, which were not reported earlier from the west Himalaya, is provided.

**Key words:** Fern Flora, Himalaya, Kumaun, Nomenclature.

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## **STUDY OF CHEMICAL FERTILIZER AND FYM ON THE GROWTH AND YIELD OF KARCHOOR: A LESS KNOWN MEDICINAL PLANT**

**A.K. Sharma, D.K. Sharma\*, Munesh\*\*, M. Kumar\*\*\* and P.K. Sharma\*\*\***

*Department of Horticulture J. V. College, Baraut (Baghpat)-250 611*

**Abstract:** Chemical fertilizers (125: 80 : 80 kg/ha) and FYM were given to the Karchoor at NBPGR, R/S Bhawali Nanital. The FYM 150 q/ha was found to be the best dose for maximum rhizome yield/plant, rhizome diameter, fresh herbage yield/plant, herbage yield/plot, plant height and plant spread. Therefore, above said FYM dose which is beneficial for the rhizome yield through high herbage production for application in Karchoor in rain fed sub temperate hills conditions of UttaraKhand.

**Key words:** Chemical fertilizer, FYM and Karchoor.

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## **EFFECT OF EXOGENOUS APPLICATION OF REGULATOR ON BIOCHEMICAL CONTENT OF LEAF IN *ROSA INDICA***

**Manoj Kumar Sharma and Y.S. Tomar**

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**Abstract:** Bio-chemical contents of leaf viz. chlorophyll a, chlorophyll b, reducing & non reducing sugar and protein reduced during the course of development. Exogenous application of Indole acetic acid (IAA), Gibberellic acid (GA<sub>3</sub>), Cytokinens (KN) reduced the reduction of this content in attached and deattached condition while Abscisic acid (ABA) and Etheophon (ETH) enhance the reduction. Out of GA<sub>3</sub>, IAA & KN, kinetin is the most effective retardant, while ETH, is highest promoter of applied regulator during the developement, the reduction is either due to mobilization of these content to younger ones, reproductive parts or degradation by hydrolytic enzyme. Perhaps, KN, GA<sub>3</sub> and IAA delay the production of hydrolytic enzyme, where as ABA and ETH not only promote the production of hydrolytic enzyme but also reduced the production of growth promoter.

**Key words:** Abscission, Growth regulator, Rose, Senescence.