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SEARCH FOR SMV RESISTANT GENE(S) IN SOYBEAN

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Soybean (*Glycine Max L. Merr.*), also known as a 'Miracle crop', is major source of oils and proteins throughout the world. Its quality is determined by its nutritional value by estimating amount of proteins, saccharides, oils and mineral contents in its seed. Besides, soybean has also been shown important for industrial applications viz. production of bio-diesel, plastics, solvents cosmetics, inks. The products of soybean, soy milk and tofu are considered to be good food for human diet. In addition, soybean is also used as livestock feed.
Soybean is susceptible to attack of Soybean mosaic virus (SMV) which is a dreaded pathogenic virus and causes much harm to soybean crop. Due to SMV attack, there is substantial decrease in soybean yield and reduction of seed quality. The main symptoms of SMV infection are mosaic dark green area on leaves and it prevents from growing leaflets properly. The symptoms depend on host genotype, virus strain, time of infection and environmental conditions. To control the disease, soybean varieties with resistance to SMV must be developed along with the systematic study of molecular mechanisms involved in disease resistance. For that, germplasm line must be identified having resistance to SMV. In most soybean accessions, resistance is conferred by a single dominant gene that makes it an easy target for genetic manipulation. The presence of SMV resistant gene in soybean genotypes has been evaluated and confirmed by genetic and inheritance studies. However, much lesser information about these genes is known in the available soybean germplasm collections. In this study, selected soybean genotypes have been analyzed using molecular approaches for the presence of SMV resistant gene(s).

Key words: Soybean, germplasm, Soybean mosaic virus, pathogen, resistance.

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PHYSICO–CHEMICAL ANALYSIS OF EXTREME AGRICULTURE SOIL FROM BHOPAL AND OCCURRENCE OF CYANOBACTERIA FOR SUSTAINABLE AGRICULTURE

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In the last decades, considerable emphasis has been placed on the use of a wide array of chemicals purporting to favorably influence soil properties. The increase in the soil contamination and need of remediation of polluted sites have become a worldwide priority with the increasing environmental concerns. Soils that occur widely in certain parts of India exhibit extreme ecological conditions for the proliferation of microbial growth. Thus, the physico-chemical study of agriculture soil is very significant because both bear upon the soil productivity. The current study analyse the physico-chemical properties of the soil and is based on various parameters like texture, pH, electrical conductivity, soil organic compounds and available nitrogen. Application of huge amount of soil contaminates likes pesticides, xenobiotics compound, heavy metals in the agriculture field create extreme environment and affected soil parameters like pH, electric conductivities, soil organic compounds, available nitrogen. At different locations studied in Bhopal, pH of the soil varies from 6.4-9.1, electrical conductivity varies from 0.87-2.5 mS, organic compounds varies from 0.5-1.96 % and total nitrogen varies from 313-486 Kgh^{-1}. These ranges differed in the values to normal ones. However, cyanobacteria are still surviving in these extreme agriculture fields due to their bestowed ability to fix atmospheric nitrogen, detoxify pesticides, and other xenobiotics. These bio-agents can improve the soil quality and plant growth, and minimize the crop production cost by supplementing the good crop management practices such as crop rotation, use of green manures, minimum tillage. They were screened from the same selected sites for their potential use as bio-agent and as a biofertilizer. The use of cyanobacteria in agriculture promises definite beneficial effects on crop productivity, if used properly. This study focused on soil amendment properties and physico- chemical analysis of extreme agriculture soil and occurrence of cyanobacteria for sustainable agriculture in future.

Key words: Cyanobacteria, Soil, Physico- chemical properties, Agriculture.

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ANTIMICROBIAL ACTIVITY AND PHYTOCHEMICAL ANALYSIS OF PHYLLANTHUS NIRURI AND CISSUS QUADRANGULARIS.

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Plants have been an important source of medicine with other qualities for thousands of years. *Phyllanthus niruri* commonly known as “Bhumi amla” with wide variety of phytochemical and their pharmacological properties is known. *Cissus quadrangularis* commonly called “Hadjod" is also one of the important medicinal plant. The plant is well known in Ayurveda for its bone healing properties.
The present study was aimed at the determination of the antimicrobial effect of *Phyllanthus niruri* and *Cissus quadrangularis*. The study revealed that both *Phyllanthus niruri* and *Cissus quadrangularis* showed potent antimicrobial activity. The crude extract and ethanolic extract of the two medicinal plant were subjected to *in vitro* antimicrobial assay employing against some human pathogen like *E.coli, Aspergillus niger* etc.. Zone of inhibition were also determined. Among the plants tested, *Phyllanthus niruri* was most effective against pathogenic microorganism whereas when their extracts were combined, it was found more effective than individual extracts of both the plants. *Phyllanthus niruri* and *Cissus quadrangularis* showed that almost all of the chemical constituents are present in them like Tannin, Phylobatannins, Saponin, Flavonoids, Steroids, Terpenoids etc..

Key words: phytochemical, antimicrobial effect, Phyllanthus niruri, Cissus quadrangularis, flavonoids.

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SUCESSFUL CAPTIVE BREEDING OF WILD STOCK OF STATE FISH MAHSEER (TOR-TOR) AND ITS CONSERVATION IN FORESTED RIVER

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Narmada River termed as Life- line of Madhya Pradesh has recently been subjected to vast ecological changes due to construction of series of dam in recent past. One of the adversely affected species due to changes in aquatic ecosystem in Narmada Mahseer (Tor tor Hamilton 1822) which is considered as flagship species and the pride of the riverine environment of Narmada has been notified as the state fish by the government of M.P in 2011. Statistics indicate that about half Mahseer comprised about 25-28% of the overall fish population in Narmada (Desai, 1967). Despite their abundance at one time, the population of this important fish species is declining rapidly due to various anthropogenic activities mainly due to construction of dams and subsequent changes in nature and duration of flow in streams. As per current estimates, the population of Mahseer in central Narmada sub basin has gone down to less than 3%. Information gathered from fisherman and fish markets shows a declining trends of Mahseer species. This paper deals with in situ conservation in forested perennial streams of barwaha district and successful captive breeding of wild stock for ex situ conservation of germplasm.

Key words: Narmada river, Tor-tor, Forested zone, Barwaha, in-situ & ex- situ conservation

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SCREENING AND ISOLATION OF CHITINASE PRODUCING MICROBES FROM SOILENRICHED IN CHITINOUS WASTE

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Chitin is world's second most abundant carbon source in nature which is found in the cell wall of many fungi and invertebrates exoskeletons. Chitin is degraded by the enzyme,chitinase. This enzyme has received great attention due to its wide use in waste management, medicines, bio-control of phytopathogens etc. It is widely distributed in various organisms including viruses, animals, bacteria, fungi, higher plants and insects. In the present study,chitinase producing microbes were screened and isolated from different soil samples. Soil samples enriched in chitinous waste were collected from local fish market, pond sediments, and garbage site.The serially diluted soil samples were streaked on different semi-solid media viz. nutrient agar,potato dextrose agar and minimal salt media containing 1%colloidal chitin for growth of chitinase producing microbes.The microbial colonies showing maximum zone of chitin hydrolysis after 5-7 days of incubation were selected for further screening.A total of 29 isolatesof bacteria and 5 of fungi capable of producing chitinase have been isolated and work is in progress for their relative efficiency for chitinase production and subsequent identification.

Key words: Chitin, chitinase, microbes, screening, waste management.

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SYNTHESIS AND CHARACTERIZATION OF AMINO ACID MEDIATED IRON NANOPARTICLES

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The interest in nanoparticles research is increasing due to the new discoveries and its capability of modulating metals into their nanosize which have great applications in the field of biology. Nanoparticles are important because of its physical and chemical properties which are mainly determined by its size, shape, composition, crystallinity and structure under 1- 100 nm.The nanoparticles were synthesized using green synthesis method.For synthesis of iron nanoparticles a reduction method was used, using 3 materials which were $FeSO_4.7H_2O$, amino acids and $NaBH_4$.Iron nanoparticles were also synthesized using different amino acids along with $FeCl_3.6H_2O$ and $FeSO_4.7H_2O$ respectively.Sodium borohydride were used as reducing agents. Fe^+ ions were added to obtain amino acid-conjugated iron nanoparticles.Analysis was done by using UV-Visible Spectrophotometer, and FTIR. Further analysis will be done using XRD, SEM etc. Biofunctionalized nanoparticles thus obtained shall be further used for biomedical applications.

Key words: Nanoparticles, functionalized, Spectrophotometer, Biofunctionalized, synthesis.

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ROLE OF LYCOPENE AND THEIR BIO-CONNECTION FOR HEALTH

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Due to this confusion that, is a tomato a fruit or a vegetable? Scientifically says a tomato is certainly fruit, true fruit they are grow from the ovary in the base of the flower, and include the seed of plant (in spite of the cultivated reasonably seedless). Therefore, the technically tomato is the fruit of the tomato plant, but it is used in cooking like a vegetable. For the tomato puree we used there are so many test, in this case one of the most essential test is (Lycopene test).Lycopene is antimicrobial and anti-oxidant cancer agent. Lycopene (from the combining Latin lycopercium the tomato species) is a blazing red carotene and carotenoids pigment and this is phyto-chemically observed in the tomatoes and the other fruits and vegetables such as the watermelons and papayas in spite of this not in strawberries and cherries. Lycopene suck up all longest wavelength of the visible light. Therefore, it showed red color. In this studies of tomato, we found that lycopene is a literally satisfaction to healthful for the cancer, heart disease, as well as the huge cholesterol are also in the tomatoes sights. Tomatoes are fairly and fresh as they are in other changeful forms, when these products are heated the action of lycopene and their bio-connection even get larger rather than the anticipated become smaller.

Keywords: Lycopene, Fruits, Vegetables, tomatoes, Tomato puree.

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BIOFERTILIZER FORMULATION BY AZORHIZOBIUM ISOLATED FROM SESBANIA ROSTRATA FOR GLYCINE MAX YIELD

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The use of inorganic fertilizer to meet the plant nutrients cause environmental pollution and degradation of soil quality. To overcome this problem Bioresourses can be used to increase the soil fertility and also can meet plant nutrients requirement.*Azorhizobium* nodulate *Sesbaniarostrata*and fix nitrogen for the plant, *Sesbaniarostrata* is a tropical legume in which nodules are formedin both stem and root system by *Azorhizobium.*

In our present study *Azorhizobium* was isolated and went through biochemical test. It was also found that *Azorhizobium* showed a potent antimicrobial activity against some human pathogen. Experiment was conducted to observe the efficacy of *Azorhizobium* inoculum by pot trial and field trial of soybean in a randomized complete block design with three replication treatment. This includes inoculum of *Azorhizobium*, *Rhizobium japonicum*, chemical fertilizer and one blank to compare. *Azorhizobium* produced suitable yield in comparative to other inoculum and chemical fertilizer for soybean. It was 36% greater.

Key words: Inorganic fertilizer, Bioresourses, *Azorhizobium*, *Sesbania rostrata*, Antimicrobial activity, Inoculum.

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ORAL HYGIENE AMONG FEMALES IN RURAL INDIA: ICEBERG TO BE PROBED

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With urban literacy rate of 83.7 for men and 74.8% for women in contrast to rural literacy rate of 75.7% for men and 62% for women; Indian society is unique in social mind set, prevalent belief and custom about health and most forgotten factor amongst this is unawareness about oral health .Mouth serves as mirror to general health and also as portal of disease to rest of body so women in their most peculiar stage should be conscious about oral health. But during past decade there has been mounting scientific evidence suggesting that periodontal disease may play an important role as risk factor for adverse pregnancy outcomes such as midterm low birth weight babies (PLBW) leading to increased mortality rate in developed as well as developing countries.Microbes or their products then interact in membrane leading to prostaglandin production and directly to uterine muscle contraction .This interaction is mediated through a cytokine cascade 15, Inflammatory periodontal tissues release significant amounts of pre inflammatory mediators mostly interleukin , prostaglandin E2 and TNF-alfa which have several systematic effects on host. Thereforeroutine periodontal examination and advice on good oral hygiene should be included as part of preconceptional care and antenatalcheck-ups during pregnancy. Any dysfunction should be thoroughly investigated and treated for the sake of health of both mother and baby.

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PHYTO ANALYSIS AND COMPARATIVE ESTIMATION OF TPC IN *EMBLICA OFFICINALIS* QUALITY PARAMETERS IN MARKETED AND FOREST SAMPLES

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Emblica officinalis (amla) undeniably a powerhouse of nutrients. It is a very delicious fruit..It is also known as indian gooseberry. It is belong to phyllanthaceae family. Emblica exhibits strong antioxidant activity. It is one of the most important plants in the traditional ayurvedic medical system as well as in other traditional health systems for immune modulatory, anti-inflammatory, antiulcer, hepatoprotective, and anticancer actions. The increase in demand of medicinal plants for the commercial herbal medicine sector led to the indiscriminate and unscientific collection without any consideration for the quality of the material collected. The ocular observations of the market sample of Aonla fruits indicate that mixing of old and diseased parts of same species and other adulterants is rampant in the local market. Laboratory analysis shows that in one kilogram of market sample, more than 20% raw material was found adulterated in all the selected species. Checking and testing the quality of proposed raw herbals traded in the markets and compared to the freshly collected raw material from forest.

Key words: *E..officinalis*, Phyto Analysis, TPC, Marketed samples and Forest Samples.

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PHYTOCHEMICAL SCREENING OF MEDICINAL PLANTS

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The Therapeutic value of medicinal plants are also a big source of information for a wide variety of chemical constituents which could be developed as drugs with precise selectively. Fresh Fennel seeds &Fresh leaves of Piper betle were taken. Their phytochemical screening was done in which fennel seeds contain some compounds like phenols , flavanoids, 2,4-undecadeinal ,5 – hydroxy – furanocoumarin and Piper betle consist of compound like fatty acid , Hydroxy fatty acid esters , hydroxyl chavicol with the latter as their main component Under the above contents Foeniculum and Piper have some important compounds which is majorly responsible for inhibition of bacterial colony these compounds are 5- hydroxyl furanocoumarin in fennel seeds and Hydroxy chavicol in piper betle.

Key words: *Foeniculum vulgare* , *Piper betle*, Phytochemical screening Hydroxy Chavicol , Hydroxyl Furanocoumarin , Flavanoids , Phenol

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THE ECOLOGY OF SUBMERGED, EMERGENT ANCHORED AND FLOATING AQUATIC ANGIOSPERMS IN SHAHPURA LAKE, BHOPAL, MADHYA PRADESH

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The aim of this study was to document the Angiosperm diversity of Shahpura lake of Bhopal, India. Qualitative floristic surveys were carried out during the winter season of 2016. Ten species of hydrophytes belonging to 10 different families were documented. The percentage of the monocot and dicot families comes to 40 % and 60 % respectively. Selected pond is rich in plants, and are having economic importance also. Since the wetland ecosystem is playing a major role in the ecosystem it is the time to take steps in conserving ponds and pond plants Mean depth of lake shrinking gradually due to severe anthropogenic pressure. Conservation of wetlands is the need of the hour to protect the biota as well as quality of drinking water.

Key words: Shahpura lake, angiospers, classification etc.

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PATHOGENIC STUDY OF BACTERIAL ISOLATES AGAINST *GALLERIA MELLONELLA* SYMBIOTIC TO NATIVE ENTOMOPATHOGENIC NEMATODES.

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Native strains of entomopathogenic nematodes active against *G. mellonella* represent a promising alternative to the intensive use of chemical insecticides to control major insect pests. *Heterorhabditidae* and *Steinernematidae* are symbiotically associated with *Photorhabdus* and *Xenorhabdus.* In this study symbiotic bacteria isolated from native entomopathogenic nematode active against greater wax moth, *Galleria mellonella* larvae in laboratory. Fifth instar larvae of *G. mellonella* were injected with different isolates of symbiotic bacteria isolated from entomopathogenic nematode. Mortality data of larvae was recorded after 24hrs, 48hrs and 72hrs and significant mortality is obtained. It can be concluded that the isolated symbiotic bacteria exhibited pathogenicity and due to their insect parasitic nature they are beneficial in biological control programmes.

Key words: *Galleria mellonella*, Native Entomopathogenic nematode, Pathogenicity, Symbiotic bacteria, Bacterial isolates.

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BIODEGRADATION OF INVASIVE *PARTHENIUM HYSTEROPHORUS* AND *EICHHORNIA CRASSIPES* WEEDS BY MICROORGANISMS

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Weeds are undesirable plants, major invaders which cause serious threats to natural environment. *Parthenium hysterophorus* and *Eichhornia crassipes* are such weeds which have pros and cons of them. *Parthenium hysterophorus* (Helianthaceae\Asteraceae) is an annual herb, also known as Carrot grass which is responsible for allergic eczematous contact dermatitis (AECD) whereas *Eichhornia crassipes* is an aquatic weed, known as Water hyacinth, which grows rapidly on the water surface due to which lack of oxygen reaches beneath the water surface ultimately leading to the death of the aquatic organism. These plants reduce the value of agricultural product or spoils aesthetic or an environmental value, therefore considered as a weed. In spite of adopting various control measures including manual, mechanical and chemical, the problem continued. The prolonged use of chemical herbicides has caused pollution at various levels. Therefore the current weed management is developing alternative techniques that are effective in controlling the weed and reducing environmental contamination from herbicides.
Studies have shown that the degradation of these weed can be done by the phenomenon of plant-pathogen interaction that is the degradation of plant by microorganisms. In the present study we isolated pathogenic microorganism which cause degradation on both the weeds. After isolation all the microorganisms were made pure and their inoculum were poured on the weeds and observed from very first day. Approximately after 8 weeks, degradations were observed and it was identified that *E.coli* and *Aspergillus niger* are the pathogen which degrade the weeds, other than this two microorganism many other microorganism were isolated from degrading parts which need to go through characterization and identification.

Key words: *Parthenium hysterophorus, Eichhornia crassipes*, allergic eczematous contact dermatitis, chemical herbicides, plant-pathogen interaction.

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A COMPARATIVE STUDY OF *RHIZOBIUM JAPONICUM* ISOLATED FROM *GLYCINE MAX* AND *AZORHIZOBIUM* ISOLATED FROM *SESBANIA ROSTRATA* FOR PRODUCTION OF BIOFERTILIZER

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Farming practices involving the use of chemical fertilizers to fulfill nitrogen source for plants growth and development which creates several major environmental problems. An alternative solution is the use of biofertilizers. *Rhizobium japonicum* nodulate *Glycine max* root system and *Azorhizobium* nodulate both root and shoot system of *Sesbania rostrata*. The suitability of biofertilizer produced by *Rhizobium japonicum* and *Azorhizobium* separately was evaluated in terms of their nitrogen fixation capacity. The objective of this study was to compare nitrogen fixing ability of *Rhizobium japonicum* and *Azorhizobium*. As per the investigation nitrogen fixing capacity of *Azorhizobium* is almost 90% and it was found that the yield of nitrogen by *Azorhizobium* is more in comparison to *Rhizobium japonicum*. Antagonistic activity of these two was also investigated against soil microorganism and both were found to be promising.

Key words: Biofertilizer, Leguminous plants, Nitrogen fixation, *Rhizobium japonicum, Azorhizobium*, Antagonistic activity.

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GUT MICROBIOTA AND HOST IMMUNE INTERACTION : A REVIEW

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The gastrointestinal tract harbors a complex population of microbes that play a fundamental role in the development of the immune system and human health. Besides an important local contribution in the host defense against infections, it has become increasingly clear that intestinal bacteria also modulate immune responses at systemic sites. The intestinal microbiota is a complex but stable ecosystem that plays a central role in human health, and disturbance of its composition and function is associated with many diseases. Our gut harbours a complex community of over 100 trillion microbial cells which influence human physiology, metabolism, nutrition and immune function while disruption to the gut microbiota has been linked with gastrointestinal conditions such as inflammatory bowel disease and obesity. Gut microbiota helps the body to digest certain foods that the stomach and small intestine have not been able to digest through the production of some vitamins (B and K). It helps us combat aggressions from other microorganisms, maintaining the wholeness of the intestinal mucosa and plays an important role in the immune system, performing a barrier effect. Taking into account the major role gut microbiota plays in the normal functioning of the body and the different functions it accomplishes, experts nowadays consider it as an “organ". However, it is an “acquired" organ, as babies are born sterile; that is, intestine colonisation starts right after birth and evolves as we grow. The composition of gut microbiota is unique to each individual, just like our fingerprints._Prebiotics and probiotics are two of the most widely studied elements in the field of gut microbiota. Both have effects that are considered beneficial for the gut microbiota which impacts various functions of the body such as the digestive condition, for this reason**,** specialists highlight the importance of including both of them in our diet**,** in order to promote a healthy microbiota.

The immune system has largely evolved as a means to maintain the symbiotic relationship of the host with these highly diverse and evolving microbes. When operating optimally this immune system–microbiota alliance allows the induction of protective responses to pathogens and the maintenance of regulatory pathways involved in the maintenance of tolerance to innocuous antigens. However, in high-income countries overuse of antibiotics, changes in diet, and elimination of constitutive partners such as nematodes has selected for a microbiota that lack the resilience and diversity required to establish balanced immune responses. This phenomenon is proposed to account for some of the dramatic rise in autoimmune and inflammatory disorders in parts of the world where our symbiotic relationship with the microbiota has been the most affected. A healthy and balanced gut microbiota is key to ensuring proper digestive functioning and host Immune interaction.

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PRODUCTION OF CELLULASE ENZYME BY FERMENTATION METHOD AND ITS ANTAGONISTIC ACTIVITY AGAINST UTI INFECTING MICROBES

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A Bacillus strain which was provisionally identified as Bacillus subtilis, isolated from vegetables peel from kitchen waste. Which is found of producing cellulolytic enzyme during growth on different celluloses against UTIs infection microbes. The isolate of Bacillus strain propagates under disparate conditions showed by CMC was the best cellulosic substrates for influence the fusion of extra-cellular cellulolytic enzymes. The isolated bacteria also showed heavy growth and liquefaction at pH 6.5, Temperature at 37^{o} C for 3-5 days of incubation. Urinary tract infection is a common contagious bacterialinfection familiar to strike the different parts of the urinary tract. UTI is much more common in adults than in children. A UTI can happen anywhere in your urinary tract is made up of Kidneys, Ureters, Bladders and Urethra. Escherichia coli is an organism that causes UTIs mostly. Other organism that commonly causing UTI are Klebsiella, Proteus, Enterococcus, Pseudomonas. E. coli shows inhibition against cellulose enzyme which is produced by fermentation process. As we need to find support for improved communication and education about UTIs in higher risk populations, the outcomes with delayed diagnosis and treatment can prevent in causing UTIs infection with advance diagnosis and treatment by survey.

Key words: CMC-ase, Bacillus subtilis, Fermentation, Downstream processing, UTI Infection, Antimicrobial Activity.

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"OPINION REFERENDUM OF DENTAL SURGEONS ON TOBACCO CESSATION-HOSPITAL BASED STUDY"
"TOBACCO CESSATION, DENTIST PERSPECTIVE, CESSATION SKILLS, QUIT KNOWLEDGE"

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Tobacco use has been described by the WHO (world health organization) as the single greatest cause of disease in current scenario. In addition to this; it also contributes in the leading cause of death, such as heart disease, strokes & cancers. Tobacco is foremost contributor to many oral health problems including oral cancers, gum disease, slow wound healing after surgery & tooth discoloration. The World Bank predicting over 450 million tobacco deaths in the next 50 years, if the present scenario does not change. In India, 47% of males and 14% of females use tobacco, and there are about 194 million users of both smokeless and smoking forms. Tobacco-related mortality in India is among the highest in the world, with about 700,000 annual deaths attributable to smoking. Annual oral cancer incidence in the Indian subcontinent has been estimated to be as high as 10 per 100,000 among males and oral cancer rates are steadily increasing among young tobacco users.

Oral cancer is a gateway to general health. So anything related to oral cavity is sole responsibility of dentist. Deposits of tobacco are visible in oral cavity. For easy assessment of tobacco use among individuals. So this questionnaire study is been planned to assess the knowledge attitude of dentist (both academics and private practitioner) towards tobacco cessation and the realization of their responsibility as health professional.

Pretested and prevalidate questionnaire, which analyses opinion of dentist population on tobacco cessation. Collected the feedback from all the dentists who attended the tobacco free India workshop.98.6% of them said that "Training of tobacco cessation is a must" which gave me a kick to start the study of tobacco cessation from.The result of the study is stated below:

Out of 300 dentists to whom questionnaire was administered 247 dentists actually took interest in filling the questionnaire. 100% of these dentists believe that tobacco cessation is a must and that it is the duty of every dentist to advise patients about tobacco cessation.Monitoring of effective planning and execution of these programs by appropriate authorities at regular intervals is vital for successful achievement of the goal of "tobacco free society".

Knowledge awareness and attitudes towards tobacco cessation among health professionals is scarce. So, training for core competency is required. Knowledge on policies on tobacco control and acts as update regulatory slips by govt. of India is the need of the hour.

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"EKPEHAL REMARKABLE STEP TO CONTROL MENACE"
"EKPEHAL FOUNDATION, CAPACITY BUILDING, TOBACCO CESSATION, BEHAVIOUR COUNSELLING, HEALTH BURDEN DUE TO TOBACCO"

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Ekpehal is training for capacity building in tobacco field. Participants got trained by experienced MASTER TRAINER with strong domain of knowledge in the field of tobacco and its control. Exposing trainees to tobacco related depth from history, health and disease, epidemiology. Facts on tobacco control programs, legislation and Act on controlling tobacco. Training comprising of hands on tobacco cessation inclusive of behavior modification, behavior shaping, and dispensing Nicotine Replacement therapy. Most important to check the balance between withdrawal management and backup of pharmacological intervention. For making master trainers across the globe the website ''www.ekpehaltfi.com" was created for capacity building, advocacy and training for competency in quit tobacco movement

Aim and objectives of EkPehal -Foundation

To reduce the tobacco use and its detrimental effects on health, specific objectives are as follows: To determine what kind of socio-demographic characteristics in tobacco influence the use of counselling as a cessation method.To determine what kinds of socio-demographic characteristics in tobacco influence the use of NRT as a cessation method.To determine what kinds of socio-demographic characteristics in smokers influence the use of medications such as bupropion as a cessation method.To determine what kinds of socio-demographic characteristics in smokeless tobacco users influence the use of counselling as a cessation method.To help tobacco cessation service providers in deciding among different methods of tobacco cessation for tobacco users with certain kinds of socio-demographic characteristics; and To give ecommendations for tobacco cessation programs such that they could focus on certain socio-demographic characteristics in order to maximize the use of tobacco cessation methods by tobacco users.

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"SIMPLE AND EFFECTIVE HOME REMEDIES TO QUIT SMOKING" "TOBACCO CESSATION, HOME REMEDY, COST EFFECTIVENESS, NICOTINE REPLACEMENT THERAPY"

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In today's high stress, fast paced environment, cigarette smoking is a habit that a lot of people succumb to due to peer pressure, media influences, misinformation of physical effects, etc. A majority of smokers do not even realize (or ignore entirely) the effects smoking has on the body. It slows down the immune system and affects fertility as well. Moreover, smoking has similar effects on the people around you that are inhaling smoke passively.

Mark Twain once said "Giving up smoking is the easiest thing in the world, I know because I have done it thousands of times." This statement is true as we have all heard the words 'I quit for a while, but started again', 'I'm quitting tomorrow' etc. Once it becomes habitual in nature, smoking becomes very hard to give up. With today's fast paced lifestyles and emotional situations that influence one to smoke cigarettes anyway, spending extra time on trying to quit seems like a task. Here are a few almost effortless home remedies that are known to relieve smokers of this habit:

1. Oats: Oats help to flush out the harmful toxins from the body while lowering the craving for smoking. It also helps in easing up the withdrawal symptoms.

2. Water: It flushes out toxins like no other substance. .

3. Grape seed extract: Grape seed extract is alkaline in nature. It helps reduce the acidity of the blood and damage caused to the lungs and body due to smoking.

4. Honey: Honey contains beneficial vitamins, enzymes and proteins, which help in giving up the habit of smoking with ease.

5. Radish: Grated radish also affects the acidity of the body caused due to continuous cigarette smoking. This remedy is very effective for chain smokers and addicts.

6. Licorice (Mulethi) : One of the most opted natural remedies to refrain oneself from smoking is chewing a licorice stick whenever you feel the urge to smoke. This is a good substitute for a cigarette. It curbs the urge to smoke and regulates the digestive system. And let's face it, it's way more economical than an E-cigarette.

7. Cayenne Pepper: Cayenne pepper helps in desensitizing the respiratory system to all addictive things.

8. Ginseng: Ginseng is found to be very effective in reducing nicotine craving.

9. Co-Enzyme Q-10: Co-Enzyme Q-10 is an enzyme obtained from natural fermented material.

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HUMAN-WILDLIFE CONFLICT IN INDIA: CAUSES, CHALLENGES AND CONFLICT MANAGEMENT TECHNIQUES

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With successive improvements in the urban-rural developments in the developing countries like India, there has been a rise of human population, sprawl of cities and villages, human interventions with the natural wildlife and biodiversity, and thereby leading to dreadful consequences like loss of life (of human beings as well as of flora and fauna) due to emerging conflicts between man and environment. This also leads to other threatening problems like collapse of wildlife populations and reduction of geographic ranges, degradation of habitat and environment, scarcity of resources, climate changes, etc.
All these issues arise because there has been a consistent imbalance in nature between the human systems and the natural ecosystems. If we do not implement the solutions and conflict management techniques to minimise the conflicts now, we will be allowing threats to future generations and pushing them towards the dangers of total disintegration. Although, these conflicts have been in existence since man's prehistory and will be throughout the interaction of man with nature, the paper suggests certain specific solutions which can still be put into effect with proper administration, in order to save human life, natural flora and fauna, resources and to avoid any kind of disproportion among them.

Key words: Human-wildlife conflict, causes, challenges, human intervention, scarce resources, management

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CHANGES IN DIVERSITY PATTERN OF FISH OFTER CONSTRACTION OF SARDAR SAROVAR DAM A CARE STUDY OF BARWANI DISTRICT M.P.

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The present study conducted to study the effect of changes in diversity pattern of fish after Construction of Sardar sarovar dam. A case study of Barwani district M.P. diversity of Narmada river were studied at Western regions. Narmada is a fifth longest river in India(central). It flows through the states of Madhya Pradesh(1077km) , Maharashtra(74 km)-(35km) then along the border between Madhya Pradesh and Maharastra (39 km) and the border between Madhya Pradesh and Gujarat(161km) over a length of 1,312km before draining through the gulf of cambay into the Arabian Sea The sites to be sampled for the present study are Khalghat to Rajghat (50 k.m.) and Rajghat to Morkata(50 k.m.), shows that the western regions of narmada river has rich fish biodiversity. After the construction of Sardar Sarovar dam many species have declined. In 2007 51 species were found but now 25 species are present. 65 rural areas were under submergence due to construction of dams.

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VERMICOMPOST: THE ORGANIC GOLD

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Waste management is considered as an integral part of a sustainable society, therefore making essential, the diversion of biodegradable fractions of the community waste from landfill into alternative management processes such as *Vermicomposting*. A revolution is unfolding in vermiculture studies for vermicomposting of diverse organic wastes by waste eater earthworms into a nutritive "*Organic Fertilizer*" and using them for production of chemical free safe food in both quantity & quality without recourse to agrochemicals. Vermicomposting is a simple biological process of composting, in which certain species of earthworms are used to enhance the process of waste conversion and produce a better product i.e. the organic manure. Vermiculture is a process by which all types of biodegradable wastes such as farm wastes, kitchen wastes, market wastes, bio-wastes of agro based industries, live- stock wastes etc. are converted while passing through the worm-gut to nutrient rich vermicompost. Vermicompost is a nutritive organic fertilizer rich in humus, NPK, micronutrients, beneficial soil microbes; nitrogen fixing- phosphate solubilizing bacteria, actinomycets and growth hormones auxins, gibberlins & cytokinins.

Key words: Waste Management, Earth Worms, Vermicompost, Organic Manure.

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THE PROSPERITY OF FARMING COMMUNITY IS POSSIBLE BY ADOPTING THE CULTURE OF "SUSTAINABLE DIET" I.E. "TAKING NUTRITION VIA FOOD RATHER SUPPLEMENTS OR MEDICINE"

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Now a day, peoples are taking about the malnutrition and rising incedents of health related problems. It is partly due to agriculture production & processing is not having nutrient outputs as an explicit goal. A better understanding of what is required from agricultural production and food processing for healthy and sustainable diets is needed. Sustainable diet can only be possible by adopting the nutrition-sensitive agriculture. To implement the Nutrition-sensitive agriculture, it needs to consider & understand the role of biodiversity in improving dietary quality along-with dietary diversity and seasonality in food supply. In order to close the nutrition gap, apart from improvement in agricultural systems, efficient storage and food processing technologies to prolong the availability of nutrition along-with shelf-life are required. The essential part of nutrition-sensitive agriculture is to ensure that, farmers are trained enough about production systems, which sustainably provide adequate amounts of nutritious food while conserving the environment. At the same time, for the benefits of nutrition-sensitive agriculture to be realized, it is must to educate the consumers to understand what constitutes a healthy and sustainable diet.

This paper has aim to cover the gist of sustainable diet and nutrition-sensitive agriculture. It is highlighting what is needed to change in the current practices of entire food chain i.e. from production to consumption or in other words from farm to plate to enrich and preserve the nutrition for ensuring the transfer of optimal health benefits through natural way i.e. through natural food. We can say it, as change in production, processing & packaging, storage, supply chain system to attaining the goal of sustainable diets specifically suited for individual's diet & health requirements. Producing the nutrition sensitive food most suited for consumer's health will also fetch good revenue to the farmers.

Key words: Bio-diversity, Agro-diversity, Agriculture, Food, nutrition, health