



CLIMATE CHANGE EFFECT ON SWEETLIME CROP PRODUCTION IN JALNA DISTRICT

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Introduction :

In Aurangabad division Agriculture scattered in Jalna. Beed, Aurangabad, Osmanabad Dist. are Included. In Jalna & Aurangabad Main Crop, Sweetlime largely production in Jalna district. Because this crop productivity favorable condition in Jalna district So, Soil, temp, Rainfall this factive affected in this Region.

The Location of Jalna district central part of Marathwada Region District location latitude extinction 19° to $20^{\circ}32'N$. longitude $75^{\circ}41'$ to $76^{\circ}42'$ East are sited Total area Jalna district 7518 59/m, cense of year 2011 are Tahasil are scattered in District. Soil are very good quality for the Sweetlime So the sweet production high quality.

In this district Kharip and Ribbi session Jawar, Cotton, Soger Cane, heet and Sweetlime is major crop in this districts in last few year Sweetlime is major crop in this district in last few year Sweetlime crop production are descres because change the Climate and low rainfall are main region was affected.

Main Object:

2001 to 2015 in between this year production of Sweetlime one affected by the climate changes region and case study

Study Area:

For the study of sweetlime crop are selected in Jalna district old sweetlime market located in Jalna city.

Location & Boundary:

In north side Satmala & Ajinta Rainge are scattered N-E- Side In this district Godawari River Basine. In this region productive soils are available, so the production very high the chitrals of Jalna district dry & hot.



RESEARCH ARTICLE

Morphological and Phytochemical Studies on *Xanthium strumarium* L.

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ABSTRACT

Xanthium strumarium L. belonging to family Asteraceae is an annual herb with abundance occurring in India. This plant has been used in the indigenous system of medicine for a long time in India as well as other countries. The morphological studies reveal that there is notable difference in the plant habit, leaves, stem, root and flowers among this plant. Morphological study also helps for correct identification and nomenclature of plant. The chemicals present in root, stem and leaves drugs are analyzed physically as well as chemically by qualitative and quantitative parameters. In present study reveals morphology, medicinal properties and phytochemical studies of plants for correct identification authenticity of drugs. The details are presented in the present paper.

Keywords : *Xanthium strumarium* L., Morphology, Medicinal properties, Phytochemistry, Jalna



Xanthium strumarium L.



“यशवंतराव चव्हाण आणि पंचायतराज व्यवस्था मुहूर्तमेठ”

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प्रस्तावना

यशवंतराव चव्हाण एक राजकारणी सत्ताधिश म्हणून महाराष्ट्राच्या सार्वजनिक जीवनात वावरलेले असले तरी त्यांचा पींड समाजकारणाचा होता हे त्यांच्या कार्य कर्तृत्वावरून सहज लक्षात येते. हाच पैलू घेवून त्यांच्या कार्याचा परामर्श घेतला आहे. महाराष्ट्रातील ग्रामीण जनतेचे परिवर्तन आणि त्यासाठीचे सत्तेचे विकेंद्रीकरण. सत्तेचे बहुजनीकरण ही यशवंतरावांच्या राजकारणांची मुळ प्रेरणा असल्यामुळे बहुजनांना विकेंद्रीकरणातून सत्ता देणे हे त्यांच्या राजकारणाचे मुख्य प्रयोजन होते.

“ यशवंतराव चव्हाण आणि पंचायतराज व्यवस्था मुहूर्तमेठ” या शिर्षकांतर्गत त्यांच्या बहुआयामी कार्याबद्दल विचार विनिमय करण्याचा प्रयत्न केला आहे. संपूर्ण महाराष्ट्राच्या मनावर राज्य केलेले एक कर्तृत्वाने सर्वगुण संपन्न नेतृत्वावर विचार मंथन व्हावे म्हणून प्रस्तुत शोध निबंध लिहण्याचा एक अल्पसा प्रयत्न केला आहे.

यशवंतराव चव्हाण यांचे विचार विश्व व कार्य कर्तृत्व व्यापक आणि विशाल आहे. यामुळे त्यांच्या व्यक्तीमत्वातील सर्वच पैलूवर प्रकाश टाकणे अशक्य आहे.

शोध निबंध संशोधन पध्दती: शोधनिबंधासाठी ऐतिहासिक संशोधन पध्दतीचा उपयोग केला असून माहितीसाठी प्राथमिक आणि दुय्यम साधनांचा वापर केला आहे.

शोधनिबंध संशोधनाची उद्दिष्टे:

- 1) यशवंतराव चव्हाण यांची जडणघडण व राजकीय कार्यावर प्रकाश टाकणे.
- 2) यशवंतराव चव्हाण महाराष्ट्राचे मुख्यमंत्री म्हणून घेतलेल्या निर्णयावर प्रकाश टाकणे.
- 3) यशवंतराव चव्हाण सर्वसामान्य जनतेसाठी घेतलेल्या धाडसी निर्णयावर विचार विनिमय करणे.

यशवंतरावांची जडणघडण : यशवंतरावांचा जन्म 12 मार्च 1913 मध्ये देवराष्ट्र येथे झाला. त्यांचे कुटूंब अत्यंत सामान्य होते. वडील प्लेगच्या साथीने काळाच्या पडद्याआड गेले. त्यानंतर त्यांचे कुटूंब कराडला गेले. त्यांचे जिवन अत्यंत दयनिय असेच राहिले. यशवंतरावांनी विद्यार्थी दशेतच स्वातंत्र्य चळवळीत भाग घेतला. स्वातंत्र्य चळवळीत भाग घेतल्याने त्यांना 18 महिने तुरुंगवासही भोगावा लागला. यशवंतरावांना स्वातंत्र्य चळवळीने घडविले. यशवंतरावांची महात्मा गांधींच्या व्यक्तीमत्वावर निष्ठा होती. पंडीत जवाहरलाल नेहरु यांच्या विचारसरणी संबंधी जवळीक आली. मानवेंद्र राय यांच्या विचारामुळे जिवनाकडे पाहण्याचा दृष्टीकोन मिळाला. अशा वैचारिक त्रिकोणात यशवंतराव उभे राहिले होते. काँग्रेस नेते जो



संसर्गजन्य रोग : व्यक्ती आणि समाजाची भूमिका

प्रा. डॉ. नवनाथ शिंदे

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गोषवारा (Abstract) :

संसर्गजन्य रोगाचे अस्तित्व आणि त्याच्या संसर्गामुळे निर्माण झालेल्या महामारी व त्यातून झालेली जीवितहाणीचा इतिहास प्राचीन असल्याचे आढळून येते. संसर्गजन्य रोग त्याला प्रतिबंध घालण्याच्या पध्दती त्याचे वैद्यकीय दृष्टीकोणातून शास्त्रीय अभ्यास जसजसा वाढत गेला तसा मानवी जीवित हाणी कमी होत गेली. काही रोग विशिष्ट प्रदेशापुरते मर्यादीत राहतात. तर काही रोगाचे संक्रमण सर्वत्र होते. त्यामुळे 'जागतिक महामारी' किंवा 'साथ' निर्माण होते. आज कोव्हीड-१९ च्या महामारीमुळे संपूर्ण जगातील मानवी जीवन प्रभावीत झाले आहे. लाखो लोकांना आपले जीव गमवावे लागले आहेत. वैद्यकीय सेवा, सुविधा अपुऱ्या पडू लागल्या आहेत. आरोग्य यंत्रणेवर ताण आला आहे. तेंव्हा सध्याच्या महामारीला रोखणे आणि भविष्यात येणाऱ्या संकटाला तोंड देण्यासाठी पूर्वतयारी करण्याचे आवाहन आज जगासमोर आहे. संसर्गजन्य रोगावर नियंत्रण आणण्यासाठी व्यक्ती, समाजातील विविध घटक, व शासन यांची भूमिका महत्वाची आहे. यासाठी प्रत्येक पातळीवर सामुदायिक प्रयत्नांची गरज आहे. यातून सर्वांनीच धडा घेऊन भविष्यात येणाऱ्या आपत्तींना रोखण्यासाठी नियोजनबद्ध पूर्वतयारी करण्याची गरज निर्माण झाली आहे. अस नाही केल तर येणारा काळ माफ करणार नाही ! हे अंतिम सत्य आहे.

Key word : संसर्गजन्य रोग संकल्पना, प्रतिबंधन, व्यक्ती व समाज भूमिका.

प्रस्तावना (Introduction) :

मानवी इतिहासामध्ये सातत्याने वेगवेगळ्या संसर्गजन्य आजारांनी मानवी समाजजीवनाला धोका निर्माण केला आहे. संसर्गजन्य आजारांमुळे अनेकांना जीव गमवावे लागले, अनेकांना त्याच्या दुष्परिणामामुळे जीव गमवावे लागले, अनेकांना त्याच्या दुष्परिणामामुळे अपंगत्व आल्याचे दिसून येते. प्लेग, तीव्र मेंदुज्वर, हिक्ताप, डेंग्यू, गोवर, कांजण्या, डांग्याखोकला, कॉलरा, पोलिओ इत्यादी आणी सध्या जगभर पसरलेला कोव्हीड-१९ कोरोना प्रथम चीन मधील वुहान प्रांतामध्ये आढळून आलेल्या कोव्हीड-१९ कोरोना विषाणूने जगभर थैमान घातले आहे. संबंध मानवी जीवन वेठीस धरले आहे. आता पुन्हा एकदा संसर्गजन्य आजाराचे स्वरूप, संसर्गजन्य आजार पसरण्याची माध्यमे, प्रतिबंधात्मक उपाययोजना, उपचारात्मक करावयाच्या व्यवस्था इत्यादींचा अभ्यास करून त्यावर मात करण्याची वेळ आली आहे. संसर्गजन्य आजाराला प्रतिबंधन घालण्यासाठी व्यक्ती आणि समाजाची नेमकी भूमिका काय आहे? त्याची जाणीव व्यक्ती व समाजाला करून देण्याची वेळ आली आहे. या सर्वांचा स्थूलमानाने अभ्यास करण्याचा प्रयत्न सदरील शोध निबंधाच्या माध्यमातून केला आहे.

शोध निबंधाची उद्दिष्टे :-

"संसर्गजन्य रोग : व्यक्ती आणि समाजाची भूमिका" या विषयाच्या अनुषंगाने सदरील शोधनिबंधाचे खालील उद्देश राहिले आहेत.

१. संसर्गजन्य रोगाच्या पूर्व इतिहासाचा अभ्यास करणे.
२. संसर्गजन्य रोग ही संकल्पना समजावून घेणे.

Poster of 19-20



PHYTOCHEMICAL STUDY OF MAERUA OBLONGIFOLIA (FORSK.) A. RICH AND MARSDENIA VOLUBILIS (L. F.) BENTH. EX HOOK F.



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ABSTRACT : *Maerua oblongifolia* (Forsk.) A. Rich family-Capparidaceae and *Marsdenia volubilis* (L. f.) family-Asclepidaceae is wild species abundance occurring in India. These plants have been used in the indigenous system of medicine for a long time. Photochemistry is the chemical analysis of plant products. The chemicals present in root, stem and leaf drugs are analyzed physically as well as chemically by qualitative and quantitative means. The physical parameters like colour, odour and taste of powdered stem, root, leaf drugs serves as primary data for drug identification. Estimation, qualitative as well as quantitative, of various chemicals taken together is assumed to produce specific data useful in standardizing a particular drug. The quantitative analysis of elements or chemicals like nitrogen, crude proteins crude fats, crude fibers, reducing sugars, non reducing sugars, total sugars etc. may fluctuate with the age of the plant, season of collection, hence these values are not considered as criteria. But their use in combination roughly gives the idea about purity of drug. Their values with little variation should be accepted as a base for standardizing a drug. The quantitative analysis of a single chemical or element should not be considered as strict criteria for standardization or evaluation similarly presence or absence of a chemical i.e. qualitative analysis of drug.

Key words : *Maerua oblongifolia* (Forsk.), *A. Rich* and *Marsdenia Volubilis*, (L. f.), *Phytochemical study*.

MATERIAL AND METHODS

The samples were collected from the medium sized authentically identified plant species from different localities of Marathwada. The roots, stems and leaves were removed carefully by hand pricking without damaging the plants. In Phytochemical studies, plants powders of 2 species were under taken for chemical analysis. Each parameter have separate procedure every parameter have different procedure.

RESULT AND DISCUSSION

A) Physical parameters : (Table.1)

i) **Colour :** The root, stem and leaf powders of selected plants species root, stem and leaf drugs have following colours. *Maerua oblongifolia* root-whitish brown, stem-whitish brown, leaf-green. *Marsdenia volubilis* root-whitish brown, stem-whitish brown, leaf-dark green.

ii) **Odour :** The root, stem and leaf powders of selected root, stem and leaf drugs have following Odour. *Maerua oblongifolia* root-characteristic, stem-specific, leaf-specific. *Marsdenia volubilis* root-characteristic, stem-characteric, leaf-specific.

iii) **Taste :** The root, stem and leaf powders of root, stem and leaf drugs have following tastes - *Maerua oblongifolia* root-tasteless, stem-bitter, leaf-intensely bitter. *Marsdenia volubilis* root-slightly sweet, stem-acrid, leaf-bitter astringent.

A) Chemical parameter :

a) **Qualitative chemical parameters :** (Table.2) Alkaloids are present in both the species under investigation. Almost all the alkaloids have medicinal property and hence their presence in the Medicinal plants is not surprising. Phytochemical screening was carried out to assess the qualitative chemical composition of crude extract. The major natural chemical groups such as steroids, reducing sugar, alkaloids, phenolic compound, saponin, tannins, amino acid, exetra. Analysis of iridoid test reveals presence of iridoid in *Maerua oblongifolia* stem *Marsdenia volubilis* root (Table.2)

Saponins : Saponins were reported higher from *Maerua oblongifolia* root and stem. Negative test of saponins reported in *Maerua oblongifolia* leaves. For other plant organ appears less saponin (Table.2).

Steroids : Present in both plant organ (Table.2) Tannins: Present in the *Maerua oblongifolia* root and stem, *Marsdenia volubilis* stem, but absence in *Maerua oblongifolia* leaves. *Marsdenia volubilis* root and leaves (Table.2).

b) **Quantitative chemical parameters :** Dry matter (DM), Bulk density, Total Ash (TA), Acid insoluble ash (AIA), Acid soluble ash (ASA), Water insoluble ash (WJA), Water soluble ash (WSA), Nitrogen (N), Water soluble nitrogen (WSN), Crude protein (CP), Reducing sugars, Non-reducing sugars, Total sugars, Crude fats (C fat), Crude fibers (CF), Cellulose, Gross

वैश्विकरण के परिप्रेक्ष्य में संत साहित्य की प्रासंगिकता

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संत साहित्य का काल पंद्रहवीं शताब्दी है। संत शब्द की व्युत्पत्ति शांत शब्द से आनी जाती है। 'संत' शब्द का अर्थ वैरागी माना है। इसके संदर्भ में परशुराम चतुर्वेदी लिखते हैं - "संत' शब्द उस व्यक्ति की ओर संकेत करता है जिसने सत रूपी परम तत्त्व का अनुभव कर लिया हो और इस प्रकार अपने व्यक्तित्व से ऊपर उठकर उसके साथ तद्रूप हो गया हो, जो सत स्वरूप नित्य सिद्ध वस्तु का साक्षात्कार कर चुका हो अथवा अपरोक्ष की उपलब्धि के फलस्वरूप अखंड सत्य में प्रतिष्ठित हो गया हो वह संत है।" विनय मोहन के अनुसार इसका अर्थ आत्मोन्नति सहित परमात्मा के मिलन भाव को साध्य मानकर लोकमंगल की कामना करता है। परंतु हमारे अनुसार 'संत' शब्द सत् से बना है। कोई भी पुरुष सज्जन ईश्वरोन्मुख हो सकता है। तो किसीने इसका अर्थ संकुचित रूप में भक्त कहा है।

भक्तिकाल में भक्ति की दो धाराएँ सगुण धारा तथा निर्गुण धारा है। सगुण के अंतर्गत रामभक्ति और कृष्णा भक्ति तथा निर्गुण के अंतर्गत ज्ञानाश्रयी शाखा तथा प्रेमाश्रयी शाखा रही।

इस काल में राजनीतिक परिस्थिति अत्यंत अव्यस्थित रही। इस काल में शासक राज्य विस्तार के मोह में पड़े थे। इस साहित्य में जनता का राजनीति से विश्वास उठ चुका था। इस काल में राजनीति में कोई पवित्रता नहीं रही थी। इस राजनीति में छल, कपट, हिंसा, कूटनीति को उचित समझा था। इस काल में अधिकांश मुस्लिम शासकों ने धर्मप्रचार तलवार के बलपर किया है। मुस्लिम शासकों की हिंदुओं के देवदेवताओं के प्रति कोई सहानुभूति नहीं रही। संत साहित्य में दूसरी ओर जनता का ध्यान समाज और धर्म संगठन की ओर गया। इस काल में हिंदू और मुस्लिम भेदों को मिटाने का प्रयास रहा है।

कुछ साहित्यकारों का मत है कि यदि मुसलमान शासक न आते तो हमारा साहित्य और भी शांती पूर्ण लिखा जाता। इस काल के साहित्य में समाज के वर्ग भेदों को मिटाने का प्रयास किया है। इस काल के संत साहित्य की एक महत्वपूर्ण भूमिका रही कि उन्होंने वर्ग भेद, दिखावटी, कुप्रवृत्तियों आदि का डटकर विरोध किया है।

संत कवियों ने कहा कि, 'हरि को भजे सो हरिका होई' इस काल में सामाजिक स्थिति अत्यंत सोचनीय थी।

विठ्ठल भक्ति संप्रदाय में मानसिक भक्ति और नामस्मरण को अधिक महत्व दिया है। इसमें प्रेमासक्ति और रहस्यमयता की भावनाएँ दृष्टिगोचर होती हैं। ये प्रवृत्तियाँ संत साहित्य में दिखाई देती हैं। कहीं कहीं पर कबीर ने विठ्ठल का नाम आरध्य देव के रूप में बड़ी श्रद्धा से लिया है।

09

EFFECT OF FUNGICIDE HEXATHIR ON DISEASE DEVELOPMENT OF TUBER ROT

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ABSTRACT

Potato (*Solanum tuberosum*) is very nutritive food crop, cultivated all over the world. It is used in our regular articles of food; contain protein, carbohydrate, vitamin, and trace elements. This economically important crop gets affected by various pests and diseases, among these, fungal pathogen plays important role in disease development of tuber rot. *Sclerotium rolfsii* is casual fungal pathogen causing tuber rot in potato. For control of tuber rot chemical fungicide Hexathir was found effective against fungal growth of *Sclerotium rolfsii*.

Keywords: Fungicides, Tuber rot of Potato, Hexathir

INTRODUCTION

The pathogen *Sclerotium rolfsii* Sacc., is a soil borne pathogen that commonly occurs in the tropics, subtropics and other warm temperate regions of the world, causing root rot, stem rot, wilt and foot rot on more than 500 plant species, including almost all the agricultural and horticultural crops (Domsch *et al.*, 1980; Farr *et al.*, 1989). This was first time reported by Rolfs (1892) as a cause of tomato blight in Florida. Later, Saccardo (1911) named the fungus as *S. rolfsii*.

Sclerotia of the fungus are initially white in colour, later it becomes light brown to dark brown at maturity and they are sub sphere, the surface finely wrinkled, sometimes flattened (Subramanian, 1964 and Mehan, 1995). *Sclerotium rolfsii* forms brown scleriosis, which is very well organized, compact structures, built of three layers, the rind, composed of empty melanised cells; the cortex cells, filled with vesicles and the medulla (Chet, 1975).

Dutta and Das (2002) studied the efficacy of Thiram and Mancozeb at 0.1 per cent concentration against tomato isolate of *S. rolfsii* *in vitro* and reported that Thiram inhibited 70.3 per cent mycelial growth and 96.5 per cent sclerotial production of *S. rolfsii*. The full chemical name for thiram is tetramethylthiuram disulfide. Hexathir is one of its trade names.

In chickpea it was shown that Thiram 37.5% was found to be highly effective at all the concentrations with 100 per cent inhibition in mycelial growth of *S. rolfsii* (Shirsole *et al.*, 2019).

Potato (*Solanum tuberosum* L.) is an economically important crop worldwide. It is classified as the fourth most important food crop after wheat, rice and maize (Wang *et al.* 2008; Schieber and Aranda Saldaña 2009; Visser *et al.*, 2009). India is one of the major potato growing country have rank fourth in production (Nayar and Varma, 1992). Its quality of protein is comparable to milk and eggs, and is superior to those present in cereals, pulses and vegetables. In highly populated areas it is the major food supplements.

Potato is important part of cotton industry for sizing the clothes, paper industries, production of alcohol and adhesive etc., (Chaddha, 1996). In views of above properties it has been a permanent solution of 21st centuries major problems like Hunger, Malnutrition's and unemployment (Khurana 2006).

Various pests and diseases including fungi affect potato cultivation. The tuber rot is caused by Fungi *Sclerotium rolfsii*, which causes faulty handling during transportation and poor storage conditions (Body, 1972; Smith *et al.*, 1987; Khurana and Chandra, 1980; Soman, 2004).

The attempt has been taken to carry out the control of tuber rot by application of chemical fungicide Hexathir.

EFFICACY OF TRACE ELEMENTS ON GROWTH OF *SCLEROTIUNROLFSI* CAUSING TUBER ROT



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ABSTRACT

Potato (*Solanum tuberosum*) is not nutritive food crop is cultivated all over the world. The crop gets affected by various pests and diseases among these insects, aphids, viruses, bacteria and fungi are major.

The tuber rot is affected by *Sclerotiumrolfsi* causes destruction and damage of healthy potato and economic loss to the farmers. For the management of disease different trace elements sources like ammonium molybdate, boric acid, copper acetate, copper sulphate, ferrous sulphate, zinc chloride and manganese chloride.

From the above trace element sources boric acid and zinc chloride show more inhibition on growth of *Sclerotiumrolfsi* ferrous sulphate copper acetate copper sulphate, show intermediate inhibition and manse chloride show highest inhibition and found effective for the control of tuber rot caused by *Sclerotiumrolfsi*.

INTRODUCTION

Potato (*Solanum tuberosum*) is important food crop. It contains high in calories, rich in carbohydrates, quality protein and good quality of dietary fibers. In small quantity used in preparation of snacks and breakfasts. Processed potato products such as chips and French fries and dehydrated potato for exports.

Agricultural exports have significance in world economy, Potato is one of the leading food crops and occupies fourth position after wheat, rice and maize crops. India is one of the major potato growing country have rank fourth in and rank sixth in production. (Nayar and Varma, 1992). Quality of Protein is comparable to milk and eggs, are superior to those present in cereals, pulses and vegetables. in highly populated areas its major food supplements. (Sings, 1999).

Potato is important part of cotton industry for sizing the clothes. Paper industries, Production of Alcohol, Adhesive. Etc. (Chaddha, 1996) In views of above properties it has been a permanent solution of 21st centuries major problems like Hunger, Malnutrition's and unemployment (Khurana 2002).

Various pests and diseases including fungi affected to potato. The tuber rot is caused by Fungi *Sclerotiumrolfsi*, causes faulty handling during transportation and poor storage conditions. (Body, 1972; Smith et al, 1987; Soman, 2004).

So, this economically important crop gets affected by various pests and diseases among these fungal pathogens are major ones. The tuber rot is caused by fungi *Sclerotiumrolfsi*. Causes faulty handling during transportation and poor storage condition (Body, 1972; Smith et al, 1987) The attempt has been taken to carry out the control of tuber rot by application of different trace element sources.

Effect of Sulphet Sources on Liner Growth *Sclerotium Rolfsi*

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Abstract:

Potato (*Solanum tuberosum*) is most Nutritive Food Crop is Cultivated all Over the world the crop get affected by various pests and diseases, Among these insects, aphids, viruses bacteria and fungi are major.

The tuber rot is affected by fungi *Sclerotium rolfsi* causes distraction and damage of Healthy potato and get economic loss to the farmers – for the Control of the diseases different Sulphate sources i.e. Ammonium sulphate, Copper sulfate, Ferrous sulfate, Magnesium sulphate, Magnese sulphate, Potassium sulphate, Zinc sulphate tested against *Sclerotium rolfsi*. Among these Magnesium sulphate and Ammonium sulphate inhibits the growth where as Ammonium sulphate were most inhibited the growth of *Sclerotium rolfsi*.

Keywords: Sulfate Sources, *Sclerotium rolfsi*, Liner growth.

Introduction –

Potato is important food crop. It contains high calories, rich in carbohydrates, quality protein, dietary fibers So its balance nutritive food. In Small quantities used in snacks and breakfast Preparations processed potato products such as chips and French fries and dehydrated potato for internal and Exports.

Agriculture exports as potato have significance in world economy and improve Indians National Economy. Potato is one of the leading food crops and occupies fourth position, after wheat, rice and maize crops. India is one of the major potato growing countries have rank fourth in area and sixth in production (Nayar and Varma, 1992) Quality of potato protein is comparable to milk and eggs these are superior to those present in cereals, Pulses and Vegetables. In highly populated areas of India potato is major food supplements (Singh, 1999, Praharajetal 2006)

Potato is important part of cotton industries for sizing the clothes. Paper Industries, Production of Alcohol, Adhesive, etc. (Chaddha, 1996) In view of above properties it has been a permanent solution of 21st centuries major problems like Hunger, Malnutrition's and unemployment (Khurana, 2006)

Various pests and diseases including Fungi affected to Potato. The tuber rot is caused by Fungi *sclerotium rolfsi*, causes foulty handling during transportation and poor storage conditions. (Body,

1972 ;Smith et al , 1987 ; Khurana and Chandra, 1980 ; Soman, 2004)

The attempt has been taken to carried out the control of Tuber rot by application of different sulphate sources.

Materials And Methods -

The effect of different sulphate sources was tested using potato slice method (Solunke, 1989 ; Wakle and Kareppa, 2000) Potato slices of 75 mm diameter were prepared. The slice were dipped in 0.25% Concentration of different sulphate sources.

A 5 mm mycelia disc of *sclerotium rolfsi* was inoculated aseptically on slice The linear growth of *Scierrtium rolfsi* were measured at 24 hours intervals. The plate non inoculated tissue acts as control. The result was presented as percent control efficacy. (PCE).

The different sulphate sources was used as Ammonium sulfate copper sulfate, Ferrous sulfate, Magnesium sulfate, Magnis sulfate, Potassium sulfate and Zinc sulfate, at 0.25%. The linear growth at different incubation period was measured in m.m

Result

The Magnesium sulfate and Ammonium sulfate inhibits the growth of *Sclerotium rolfsi*, where as Zinc sulfate were found most inhibitory wa on growth. The other sulfate sources like copper sulfate, Magnesium sulfate Potassium sulfate, and ferrous sulfate inhibition on growth of *Sclerotium rolfsi* growth as compared to control, as

Diseases Management of Leaf spot in Ambrette from *Azadirachta indica*

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ABSTRACT:

Ambrette (*Abelmoschus moschatus*) is commonly known as Muskmallow, Belongs to family Malvaceae. It is commercially and medicinally important, used to control diseases disorders. The seed are of great economic importance that used in manufacture of Perfumes in a pharmaceuticals industries. This plant gets affected by various pests and diseases, of the Leafspot disease are more important. In the disease development fungal pathogen *Alternaria alternata* plays prominent role in destruction and foliage of leaves and ultimately yield loss occurred.

In order to control Leaf Spot disease caused by *Alternaria Hibiscum*, plant extract of *Azadirachta indica* was used and it is found useful to reduce the growth of Pathogen significantly.

KEY WORDS:

Ambrette, Muskmallow, *Abelmoschus Moschatus*, Phytoextract, *Azadirachta indica*, *Alternaria alternata*

INTRODUCTION

Ambrette [*Abelmoschus moschatus*] is medicinal and ornamental plant is distributed in India. The seed contains aroma that is similar to that of Musk Kasturi obtained from the Deer (*Moschus moschiferus*). It is used in Perfume industries, in blending in chewing Tobacco ingredients of several medicines it is coolant, Diuretic, checks the vomiting and cures due to imbalance. The seed coat yields an aromatic oil used in cosmetics, scents. It is used in imparting Musky odour like Pan masala and Incense sticks (Srivastava, 1995).

Ambrette suffer from several fungal and viral diseases like Mosaic disease, anthracnose, leaf spot disease are important. Initial symptoms of diseases caused by *Alternaria alternata* includes appearance of dark brown spot on the leaves, spot are more prevalent on margins (Singh & Gupta, 1961., Wakle and Kareppa, 2000., Wakle 2015) the dark brown p

FUNGICIDAL EFFICACY OF CARBANDZIM FOR DISESE MANAGEMENT

IN DRY ROT OF POTATO

G.L. Wakle



ABSTRACT :-

Potato (*Solamm, tuberosume*) is important nutritive food crop and cultivated all over the world. It get affected by various pest and diseases, among these fungal pathogen is an important one. The Potato gets affected by *Fusarium coerulewn (Lib) sach.* and cause dry rot. Due to disease development heavy economic loss is occurred. For the control of this diseases different fungicides was tested against *Fusarium coerulewn (Lib) sach.* The Fungicide like Carbandazim was found effective control of fungal growth causing Dry rot of Potato.

KEY WORDS :- Potato dry rot, fungicide carbandazim

INTRODUCTION :-

Potato is an important food crop. It contain high protein calories, more edible energy, rich in carbohydrates. Quality protein dietary fibers as a balance naturitive food Quality of potato proteins is comparable to egg and milk, therefore superior to those present in cereals pulses and vegetables for the high population areas like India potato is an important supplement food (Datar and Mayee 1985)

Potato is an important part of cotton industries for sizing the clothes. Paper industries. Production of alcohol, adhesives etc.

In view of above properties, it is a permanent solution of 21st century's major problems like hunger, malnutrition and unemployment. (Prahraj, 2006; Shekhwat 1999).

The Dry rot is causes by fungi *Fusarium coerulewn (Lib) sach.* That Causes by faulty handing, transporting and storage. (Boy 1972, Somani 2004).

The main symptoms of the disease is shrinkage and drying of tuber with content due to major water loss tuber become light weight (Gadewar 1989, Hawale 1993).

The present investigation has been carried out to control the dry rot by application of fungicides as carbandazim.

MATERIALS AND METHODS

The efficacy of different fungicides was tested by using potato slice. (Solunke 1996; Wakle and Kareppa 2000.)

Potato slice of 75 mm diameter and 10 mm thick were prepared. The various concentration of carbandazim were prepared on the basis of active ingredients i.e. 100 to 1000 micrograms per milliliters. The slice were dipped in different concentration of Carbanadazim for five miniutes. Sterilized distilled water

Research Article

EFFECT OF CARBON SOURCES ON DISEASE DEVELOPMENT OF TUBER ROT

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ABSTRACT

Potato (*Solanum tuberosum*) is one of the nutritive food crop and is almost cultivated all over the world. The crop gets affected by various pests and diseases. Among these are insects, aphids, viruses, bacteria and fungi.

The tuber rot is affected by fungi *Sclerotium rolfsii* causing distraction and damage of Healthy potato and get economic loss to the farmers. For the Control of the diseases different Carbon Sources were tested against *Sclerotium rolfsii*. Among the Carbon Sources Glucose, Fructose, Maltose and Cellulose showed stimulatory effect while mannose showed inhibitory effect on growth. Mannose showed reduction in growth of *Sclerotium rolfsii*.

Keywords: *Solanum tuberosum*, Potato, Tuber Rot

INTRODUCTION

Potato is an important food Crop. It is high in calories, rich in carbohydrates, quality dietary fibers. So it is balance nutritive food. It is used in small quantities in snacks and breakfast preparations and in processed potato products such as chips, French fries and dehydrated potato products. It is major product in agriculture exports as potatoes have significance in world economy and thus also improve Indians National Economy. Potato is one of the leading food crops and occupies fourth position, after wheat, rice and maize crops. India is one of the major potato growing countries have rank fourth in area and sixth in production (Nayar and Varma, 1992). In highly populated areas of India, potato is major food supplements (Singh, 1999)

Potato is important part of cotton industries for sizing the clothes. Paper Industries, Production for production of Alcohol, Adhesive, etc. In view of above properties it is providing solutions to major problems like Hunger, malnutrition's and unemployment (Khurana, 2006). Various pests and fungi affect Potato health. The tuber rot is caused by Fungi *Sclerotium rolfsii*, due to faulty handling during transportation and poor storage conditions. The attempt has been taken to study the application of different carbon sources over control of Tuber rot.

MATERIALS AND METHODS

The Interaction of carbon sources was tested using potato slice method (Solunke 1996, Wakle). Potato slices of 75 mm diameter thickness were prepared. The slices were dipped in 0.25% concentration of different carbon sources.

A 5 mm mycelia disc of *Sclerotium rolfsii* was inoculated aseptically on each slice. The linear growth of *Sclerotium rolfsii* were measured at 24 hours interval. The plate rot inoculated tissue acted as control. The result was presented as percent control efficacy (PCE).

RESULTS AND DISCUSSION

The different carbon sources used were Glucose, Fructose, Mannose, Maltose, Mannitol, Cellulose, Lactose, at 0.25%. The linear growth at different incubation period was measured in mm. The carbon sources such as Glucose, Fructose, Maltose and Cellulose stimulated the growth of *Sclerotium rolfsii*, on the other hand mannose was inhibitory on growth, while mannitol and lactose showed reduction

PATHOGENIC BIOCHEMICAL CHANGES IN AMBRETTEE SEEDS DUE TO ALTERNARIA

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ABSTRACT

Ambrettee (*Abelmoschus Moschatus Medic*) is commonly known as Mushkdana is cultivated for their musk scented seeds useful in perfumery industries. The seeds are valued for their volatile oil present in the seed coat. The seed meal is useful in poultry and cattle feed, decoction of seed are useful in creating nervous disability, hysteria skin diseases and interstitial disorder. This plant is commercially and medicinal important and gets affected by various pests and diseases among these fungus play important role in destruction and gets seed yield loss among these *Alternaria Alternata* important one. During the pathogenicity biochemical interaction takes place in total carbohydrates and moisture found more in infected seed ash. Crude lipid and crude protein content were found less than the healthy seed.

Key-Words : Ambrettee seed bio chemical interaction, *Alternaria Alternata*, Mushkdana.

INTRODUCTION

Mushkdana or ambrettee seed (*Abelmoschus Moschatus Medic*) is a herbaceous plant distributed in India in parts of Deccan and Karnataka in hilly region and foothills of Himalayas. The ambrettee seed possesses an aroma similar to that of musk (*Kasturi*) obtained from Musk deer (*Moschus Moschiferus*) and therefore find use in perfumery industries, in blending of chewing tobacco (*zarda*) and in ingredients in several medicines. The seed coat yields an aromatic oil that are important material preparing high quality perfumes scents and cosmetics, pan masala and incense sticks, (Umesh Shrivastava (1954) Singh and Gupta (1961), Shrivastava G.S. (1963) Shrivastava (1976), Wakle and Kareppa (2000).

MATERIALS AND METHODS

Analytical grade reagent (analar, B.D.H. or emarks) were used the seed of ambrettee (*Abelmoschus Moschatus Medic*) were collected from V.N. Marathwada University Parbhani (M.S.) it was cleaned & separated as healthy and fungal infected (Mukadam & Gangawane, 1982) stored and used for analysis (A.O.A.C. 1975) The attempt has been made for investigation to find out the bio chemical changes in seed during pathogenicity infected by *Alternaria Alternata* (Mukadam, 1997, Z Barnett H 1970)

Moisture

A 5 gm seed of ambrettee were taken and dried at 110 degree centigrade from 5 hrs. oven dried seeds

were cooled and weighed. The resultant loss in weight was calculated as % moisture content using the formula (A.O.A.C.1970) %

$$\text{Percent moisture} = \frac{W1}{W2} \times 100$$

$$\text{Percent moisture} = \frac{W1}{W2} \times 100$$

$$W1 = \text{Weight of loss in sample}$$

$$W2 = \text{Weight of sample}$$

$$\% \text{ Soild} = \frac{W3}{W2} \times 100$$

$$W3 = \text{Weight of residue after drying}$$

Total ash

The total ash was determined by according to A.O.A.C. (1975) 5 gm seed of ambrettee was washed in crucible and ignited at low flame till all the material was completely charred. Then it was kept in muffle furnace for 5 hrs. at 500 degree centigrade and further cooled and desecrated and weighed. Then this was repeated till 2 consecutive weights were constant and % ash was calculated. (Patil et. al. 1988)

Crude lipids (fats)

5gm seed of ambrettee was weighed accurately in thimble and defatted with petroleum ether. The extract was evaporated and crude fat content was calculated A.O.A.C. (1975)

Crude Protein

Protein was estimated by Micro Kjeldahl method by using 0.5gm sample of ambrettee seed by



To Study Graphically Dielectric Properties Of Nanded Saline Soil At 5.2 Ghz.

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ABSTRACT

The dielectric properties, both ϵ' , (real part) and ϵ'' (imaginary part) of complex dielectric constant are measured for Nanded saline soil at 5 GHz. The study also includes measurement of dielectric properties for various percentages of moisture contents, The Shorted waveguide technique is used for dielectric measurement as using automated C-Band microwave bench set up. The least square fitting technique is used to calculate dielectric constant, ϵ' , and dielectric loss, ϵ'' , and errors in their measurements. The laboratory data obtained are useful for the interpretation of data in remote sensing applications, particularly in agriculture.

Keywords: Saline soil, Dielectric properties, 5 GHz microwave frequency, Brightness temperature, Emissivity, Alkalinity, Videography, Remote sensing; Hyper spectral; Microwave; Image classification; Modelling; Monitoring remote sensing, ERDAS, arid region, Land sat satellite .

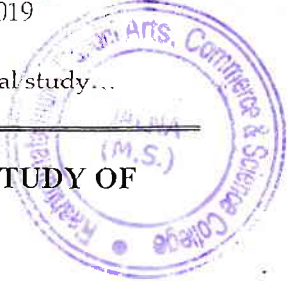
INTRODUCTION

Soil salinity caused by natural or human-induced processes is a major environmental hazard. Nearly 40% of all irrigated land is salt-affected, and this proportion tends to increase in spite of considerable efforts dedicated to land reclamation. This requires careful monitoring of the soil salinity status and variation to curb degradation trends, and secure sustainable land use and management. Multitemporal optical and microwave remote sensing can significantly contribute to detecting temporal changes



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MORPHOLOGICAL ANATOMICAL AND PHYTOCHEMICAL STUDY OF SANSEVIERIA ROXBURGHIANA L.

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ABSTRACT

It is wild as well as cultivated species occurring in Maharashtra region. This plant has been used in the indigenous system of medicine for a long time. Root is used as an electuary in consumptive complaints and chronic cough of long standing. Juices of tender shoots are given to children to clear viscid phlegm in throat (Maheshwary, 2000). Rhizome is used in purgative, febrile, gonorrhoea, heart-disease, itch, leprosy, fever, cough, piles, asthma, tuberculosis and dysuria (Saraswathy, 2007). Juice of tender shoots given to children for cleaning the phlegm from the throat (Ambasta *et al.* 1986).

In Maharashtra region of India *Sansevieria roxburghiana* L. belonging to the family Agavaceae are locally known as 'Ghannasaphan, Nagphan, Mundari, Morwa, Murgali. These local names derived from some local importance. The description of plant species is short imperfect or unscientifically documented. Present study reveals for morphology, anatomy and phytochemical study of the plants for the correct identification, authenticity and genuineness of drugs. The details are present in paper.

Sansevieria roxburghiana L. Family - Agavaceae

Schult. and Schult. F. in R. and S. Syst. Veg. 7: 357, F. 12, D-E. 1829; Laxshmi, in Sharma *et al.* Fl. Maharashtra st. Monocot 142. 1996. *S. zeylanica* Roxb. Pl. corom. T. 184. 1804, non Willd. 1799; Hook. F. op cit. 270; Cooke, Fl. Pres. Bombay, 3: 252. 1958, (Repr.)

Vernacular names: - **Sanskrit:** Marura, Maruva, **Sinhalese:** Niyanda. **Tamil:** Marul, **Telugu:** Chaga, Chamacada, Saga. **Bengal:** Gorachakra, Murba, Murga, Murgabi **English:** Bowstring Hemp, **Hindi:** Marul, Murva, **Marathi:** Ghannasaphan, Nagphan, Mundari, Morwa, Murgali..

Description: Scapigerous, perennial herbs, Leaves linear-oblong, 30 - 45 × 3 - 4 cm, erect, slightly narrowed at base, entire, acute, convex on lower (outer) surface, shallowly channeled on the inner surface, green with irregularly wavy, grayish cross bars, with yellow margins; tip ending in a solid, 2 cm long cusp. Flowers dull brownish white, 2 - 3 cm long, clustered along the stout scapes perianth segments linear-oblong, united for 1/3 at their base. Ovary oblong 2 mm long, fruits not seen.

Flowers: - May to September. **Distribution:** - Native probably of S. Africa, grown in gardens. **Locality:** - Jalna, Aurangabad, Parbhani, Beed.

Medicinal Properties:

Fibers development from leaf (Arthur *et al.*, 1947). *Sansevieria* uses bowstring hemp obtained from leaf (Albert, 1951). The leaf fibers used cordage, bowstring hemp, (Katherine Esau, 1959). In *sansevieria*, *Agave* and *Musa* the average length of the extraxylary fibers

टोपी शुक्ला में अभिव्यक्त सामाजिक चेतना

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राहीमासूम रजा का जन्म १ सितंबर १९२७ गाजीपुर उत्तरप्रदेश में हुआ। प्रारंभिक शिक्षा वही हुई। अलिगड़ विश्वविद्यालय के उर्दू साहित्य के भारतीय व्यक्तित्व पर पीएच.डी. तथा कई वर्षों तक उर्दू साहित्य पढ़ते रहे। उनको फिल्म लेखन के लिए बम्बई जाना पड़ा। फिल्मों के साथ-साथ हिन्दी उर्दू में समान रूप से लेखन किया। वे कवि कथाकार के रूप में जाने जाते हैं। उन्होंने टोपी शुक्ला उपन्यास लिखकर सामाजिक जीवन को जगाया है।

टोपी शुक्ला के जन्म से लेकर मृत्यु तक की घटनाओं का यथार्थ चित्रण किया है। टोपी को घर में और बाहर भी अनेक समस्याओं का सामना करना पड़ा। पढ़ते समय स्कालरशिप से हाथ धोना पड़ा। जाति जाति में मतभेद देखने को मिले। हिन्दु संस्था में हिन्दु का प्रभाव तथा अलिगड़ विश्वविद्यालय में मुस्लिम लड़कों का प्रभाव दिखाई दिया। इसका जितना जागता उदाहरण अलिगड़ विश्वविद्यालय में एक मात्र मुस्लिम लड़के को स्कालरशिप दी जाती। उपन्यास में अनेक समस्या दिखाई देती जिसमें पारिवारिक अनैतिक, छूत अछूत, नौकरी पेशा, उच्च निच, दहेज तथा जाति जाति में संघर्ष देखने को मिलता है।

१) पारिवारिक जीवन :

टोपी शुक्ला के जीवन में अनेक घटनाएँ आती हैं। जन्मते ही माँ ने उसे देखा नहीं। वह देखने में इतना कुरूप था कि उसे देखते ही माँ का दूध चला गया। यह कहा से आया है। उसे घर में हमेशा नफरत के आलावा कुछ नहीं मिला। उसे कुछ चीजों की जरूरत रही तो कभी समयपर चीज नहीं मिलती थी। बलभद्र को माँ ने मारा तो उसके गुस्से में वह भाग गया। उपन्यासकार ने कहा कि देश में दो नंबर के जितने भी बच्चे हैं उनकी यहीं दशा होती है। वह इस प्रकार से - "इस देश में जिस का कोई काम तो होता ही नहीं। पशु-पक्षियों की रक्षा समितियाँ सैकड़ों के हिसाब से बिक रही हैं और दूसरे बेटे मारे-मारे फिर रहे हैं। अवतारों में भी जिसे देखिए वही पहला बेटा है। किसी अवतार के सिर पर कोई बड़ा भाई हो तो बताइए! लक्ष्मण और भरत जैसे भाई राम की छाया के बोझ-तले पीसकर रह गये। तमाम छोटे भाई सपोर्टिंग कास्ट में आ जाते हैं।"^१

