3.3.2 Number of books and chapters in edited volumes/ books published and papers published in national/ international conference proceedings per teacher during last five year

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Pragatik Shikshan Sanstha's

Nutan Art's College Rajapur

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जावक क्र NACR/417/23-24 दि. 21/08/2023

DVV CLARIFICATION

3.3.2 :Total number of books and chapters in edited volumes /books published and papers in national/ international conference proceding year wise during five yearsS

Nutan Arts College, Rajapur IQAC Tal. Sangamner, Dist. Ahmednagar

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Tal: Sangamner, Dist. Ahmednagar

3.3.2 Number of books and chapters in edited volumes/books published and papers published in national/ international conference proceedings per teacher during last five year

Sl. No.	Name of the teacher	Title of the book/ chapters published	Title of the paper	Title of the proceedings of the conference	Name of the conference	National / International	Year of publication	ISBN number of the proceeding	Affiliating Institute at the time of publication	Name of the publisher
1	Dr .Jangid S.R	NA	Shasnachya Mahilav Balkalyan vibhag yojana chikistak Abhyas	Scholarly Rrsearch Journal For Interdisciplinary	NA		2017	ISSN: 2319-4766		
2	Dr. Jangid S.R	NA	Ahmednagar zilyatil Nagar palikanchya Mahila v balkalyan vibhagachya yojana cha abhyas	Scholarly Rrsearch Journal For Interdisciplinary	NA		2017	ISSN: 2349-4766		
3	Dr.Pravin Aher	NA	Shendriya Shetiche Mahatva	Scholarly Reserch Journal for interdisciplinary studies	NA		2017	ISSN:2349-4766		
4	Dr. Jangid S.R	NA	Role of the Banking sector in indian Agriculture	Structure of Agricultural Finance in india	NA	National	2018	ISBN:978-9387665-21-7		
5	Wakchaure S.P	NA	Need of accrediation and challenges	Scholarly Rrsearch Journal For Interdisciplinary Studieis	NA		2018	ISSN :2278-8808		
6	Prof.Wakchaure Shital P	NA	Social Media: Addiction Symptoms &Treatments	Scholarly Rrsearch Journal For Interdisciplinary	NA		2019	2278-8808		
7	Dr. Jangid S.R	NA	sarvjanik shekraril Bankanche punar	International Reserch Journy	NA		2019	EISSN:2348-7143		
8	Chandrakant Harde	NA	Bhartatil pradeshik rajkiy paksha ani rajkaran	Reserch Journey	NA		2019	ISSN-2348-7143		
9	S.N.Varpe	NA	Phytochemical Composition and antioxidant Activities of Chlorophytum Tuberosum Leaf	International Journal of All Research Education & Scientific Methods	NA		2021	ISSN: 2455 -6211	NO	
10	Varpe S.N., Sneha Mendhe	NA	In vitro organogenesis of shoot from Carthamus tinctorius	EPRA International journal of multidisciplinary Research	NA		2021	ISSN(ONLINE) 2455-3662	NO	
11	A.R. Tuwar1, S.D. Kadlag2 and R.G. Khose3	NA	Antyfungal Activities of leaf Extracts of	INTERNATIONAL JOURNAL OF RESEARCHES IN BIOSCIENCES, AGRICULTURE AND TECHNOLOGY	NA		2021	e-ISSN 2347 – 517X	No	
12	Kadlag .S.D	NA	EFFECT OF AQUEOUS FOLIAR SPRAY OF LEAF EXTRACTS OF SOME PLANT SPECIES OF ASTERACEAE ON RUST DISEASE INCIDENCE % OF GROUNDNUT.	INTERNATIONAL JOURNAL OF RESEARCHES IN BIOSCIENCES, AGRICULTURE AND TECHNOLOGY	NA		2021	e-ISSN 2347 – 517X	No	
13	S. R. Kale1, B.N. Sonawane1, B. D. Takate2 and S.D. Kadlag3	NA	FLORISTIC DIVERSITY OF SHRIRAMPUR TAHASIL, DISTRICT AHMEDNAGAR (MAHARASHTRA).	INTERNATIONAL JOURNAL OF RESEARCHES IN BIOSCIENCES, AGRICULTURE AND TECHNOLOGY	NA		2021	e-ISSN 2347 – 517X	No	
14	Dr .Kadlag S.D	NA	Fungicidal Activity of an allelopathiv plant tridaxprocumbens		NA		2021	ISBN-978-81-93011507		

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प्रा. डॉ.ए.एम. पवार & संगिता रामेश्वरलाल जांगीड (96-100)

शासनाच्या महिला व बालकल्याण विभाग योजना - चिकित्सक अभ्यास

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[२] *संशोधक विद्यार्थी, पदव्युत्तर अर्थशास्त्र संशोधन केंद्र, सहकार महर्षी भाऊसाहेब संतुजी थोरात महाविद्यालय, संगमनेर*

प्रस्तावना

आज सगळीकडेच लोकसंख्या विस्फोटाचे संकट पसरले आहे. त्यामुळे देशात दारिद्रय, कुपोषण, बेकारी यासारखे गंभीर प्रश्न सर्वत्र पसरले आहेत. हे प्रश्न शहरी भागापुरतेच नसून ग्रामीण भागात देखील आढळतात कारण वारंवार पडणारा दुष्काळ, हंगामी स्वरूपाची शेती, पावसाची अनिश्चितता या सर्व कारणांमुळे शेतीचे उत्पादन फारसे होत नाही. त्यामुळे ग्रामीण व शहरी भागात दारिद्र्य, छुपी बेकारी, कुपोषण यासारख्या समस्या निर्माण झाल्या आहे. काही लोकांना दररोजच्या आपल्या आहारात योग्य जेवण सुध्दा मिळत नाही, स्त्रियांना समाजात चांगली वागणूक मिळत नाही, निरक्षर ठेवले जाते.त्याच बरोबर चुल-मुल एवढेच त्यांची काम आहे. असे सांगून त्यांना नोकरीसाठी पाठविले जात नाही.

अगदी प्राचीन काळापासून स्त्रिया सामाजिक व कौटुंबिक अन्यायाच्या बळी ठरल्या आहेत. पारंपारीक भारतीय समाजात तर स्त्रियांना अनेक हक्कांपासून वंचित ठेवण्यात आले होते. स्त्री ही पुरूषांच्या मार्गातील अडसर आहे. या दृष्टीकोनातून स्त्रीकडे पाहिले जात होते. परिणामी, भारतीय समाजातील एक दुर्बल व अन्यायग्रस्त घटक अशी स्थिती त्यांना प्राप्त झाली होती. साधारणतः २० व्या शतकाच्या सुरूवातीपासून स्त्रियांच्या अवस्थेत व सामाजिक स्थानात बदल होऊ लागला. अर्थार्जनासाठी स्त्रिया बाहेर पडू लागल्या आणि त्यातून त्यांना थोडेफार आर्थिक स्वावलंबन लाभले. अर्थात, स्त्रिया घराच्या बाहेर पडू लागल्या तरी स्त्री-पुरूष समानतेचे तत्व समाजाच्या गळी लगेच उतरणे शक्य नव्हते. पुरूषप्रधान संस्कृतीचा प्रभाव अजूनही आहेच.

त्यामुळे महिलांचा फारसा विकास होत नाही. त्यामुळे देशाचा सर्वांगीण विकास व्हावा, दारिद्र्य, कुपोषण, भुकमारी यासारख्या समस्या दूर व्हाव्या म्हणून शासनाच्या महिला व बालकल्याण विभागामार्फत या समस्या सोडविल्या जात आहे. सरकार मार्फत अनेक महीला व बालकांसाठी योजना राबविल्या जातात त्या खालीलप्रमाणे -

अभ्यास विषयाची निवड :- शासनाच्या महिला व बालकल्याण विभागाच्या योजना कोणकोणत्या आहे. याचा अभ्यास करण्यासाठी प्रस्तूत विषयाची निवड केली आहे.

संशोधन विषयाची उद्दिष्टे :- प्रस्तूत अभ्यास विषयाची उद्दीष्टे पुढीलप्रमाणे -

१) शासनाच्या महिलांसाठी असणाऱ्या योजनांचा अभ्यास करणे.

२) शासनाच्या बालकांसाठी असणाऱ्या योजनांचा अभ्यास करणे.

संशोधन विषयाची गृहितकृत्ये :-

१) शासन महिला व बालकल्याण विभागामार्फत महिला व बालकांसाठी अनेक वेगवेगळ्या योजना राबविते.

संशोधन पध्दती :-

प्रस्तूत विषयाच्या अभ्यासासाठी दुय्यम सामग्रीचा वापर करून माहिती संकलीत केली आहे. यात मासिके, पुस्तके व संकेत स्थळे यांचा वापर केला आहे.

नमुना निवडीचा आकृतीबंध :-

शासनाच्या महिला व बालकल्याण विभागामार्फत महिला व बालकांसाठी एकूण ५० योजना आहे. या योजनांपैकी सोईस्कर नमुना निवड पध्दतीनुसार महिलांच्या १० योजना व बालकांच्या १० योजना निवडल्या आहेत.

महिला व बालकल्याण योजना -

महाराष्ट्र शासनाने महिला व बालकांच्या सक्षमीकरणाकरीता केंद्र शासनाच्या धर्तीवर महाराष्ट्र राज्यात सामान्य प्रशासन विभागाच्या दि. २४/०६/१९९३ च्या निर्णयाने × महिला व बालकल्याण × हा स्वतंत्र विभाग निर्माण करण्यात आला आहे. महिला व बालकांच्या सर्वांगीन विकास व सक्षमीकरण करण्याच्या मुख्य उद्दिष्टाने महिला व बाल विकास विभागाची स्थापना करण्यात आली आहे.

समाजातील निराधार / निराश्रीत / पिडीत महिला व बालकांसाठी कल्याणकारी योजना राबवून त्यांचा सर्वांगीण विकास साधण्यासाठी विशेष प्रयत्न करणे तसेच त्यांच्या सामाजिक,आर्थिक, शैक्षणिक उन्नतीसाठी त्यांच्या गुणांना अधिक वाव देऊन, त्यांना समाजाच्या मुख्य प्रवाहात सामावून घेणे. महिला व बालकांच्या विविध योजनांना गती देऊन त्यांच्याकरीता विविध अधिनियम तयार करून त्यांची प्रभावीपणे अंमलबजावणी करणे इ. कार्य या विभागामार्फत केली जातात.

योजनेची उद्दिष्टे -

१) महिला व बालकांच्या सर्वांगीण विकासासाठी वैयक्तिक व सामुहिक लाभाच्या योजना तयार करून त्यांचा विकास साधणे.

२) केंद्र शासनाच्या महिला व बालकल्याण मंत्रालयाद्वारे निर्देशीत केलेली एकात्मिक बाल विकास योजना राज्यात प्रभावीपणे राबविणे.

३) स्त्री-पुरूष समानता, स्त्री भेदभाव नष्ट करणे, लिंग समभाव ही मूल्ये राज्यातील सर्व विभागांच्या योजनांत प्रतिबिंबित होण्यासाठी जेंडर बजेटींगचा समावेश करणे.

४) ० ते ६ वयोगटातील मुलांचा पोषण व आरोग्यविषयक दर्जा सुधारणे.

५) मुलांच्या योग्य मानसिक, शारीरीक व सामाजिक विकासाचा पाया घालणे.

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४) बालसदन - पर्याय कौटुंबिक वातावरण निर्माण करून मातेच्या ममतेखाली अनाथ मुलांना जिव्हाळा, प्रेम याच बरोबर संरक्षण, अन्न, वस्त्र, निवारा, शालेय शिक्षण, वैद्यकिय सुविधा उपलब्ध करून त्यांचे पुनर्वसन करण्यात येते.

५) अनाथालय चालविण्यासाठी स्वयंसेवी संस्थांना अनुदान - अनाथ, निराधार व निराश्रीत मुलामुलींना संस्थेत प्रवेश देऊन त्यांच्या वास्तव्याच्या कालावधीत त्यांना संरक्षण, अन्न, वस्त्र, निवारा, शालेय शिक्षण, व्यावसायीक प्रशिक्षण, वैद्यकिय सुविधा उपलब्ध करून त्यांचे नोकरी, व्यवसाय व विवाहाद्वारे पुनर्वसन करण्यात येते.

६) निराधार निराश्रीत बालकाश्रम (डेस्टीटयुट होम) - बालकांमध्ये बालकांना संरक्षण, अन्न, वस्त्र, निवारा, शालेय शिक्षण, व्यावसायीक प्रशिक्षण, वैद्यकिय सेवा, पुरविण्यात येते त्यांचे नोकरी, व्यवसाय, विवाहाच्या मार्गाने समाजामध्ये पुनर्वसन करण्यात येते.

७) बहुउद्देशिय सामुहिक केंद्रे - बालवाडी, वाचनालय, शिवण वर्ग, छंद वर्ग,साक्षरता वर्ग, रोग प्रतिबंधक कार्यक्रम, आरोग्य विषयक व सकस आहार विषयी मार्गदर्शन.

८) बाल मार्गदर्शन केंद्र - गलिच्छ वस्ती व झोपडपट्यांमधील मुले बाल गुन्हेगारी प्रवृत्तीकडे जाऊ नये यासाठी त्यांना फावल्या वेळेचा उपयोग कसा करावा याबाबत मार्गदर्शन करून त्यांना करमणुकीचे साहित्य, पुस्तके, खेळ साहित्य, केंद्रामध्ये पुरविण्यात येते.

९) बाल मार्गदर्शन चिकित्सा केंद्र - सर्वसाधारण वर्तनापेक्षा मानसिक दृष्टया वेगळ्या प्रकारे मुले वागू लागली तर त्यांना उपचारासाठी दवाखाण्यात दाखल करण्यापूर्वी चिकित्साकेंद्रात उपलब्ध असलेल्या मानसोपचार तज्ञांचा सल्ला घेऊन मुलातील समस्यांचा अभ्यास करून त्यांच्यावर कोणता उपाय करणे आवश्यक आहे याबाबत पालकांना मार्गदर्शन करून योग्य तो सल्ला देणे.

१०) बाल संगोपन योजना (बेघर आणि निराश्रीत मुलांसाठी संस्थाबाह्य सेवा) - अनाथ बालक किंवा ज्यांचे एक किंवा दोन्ही पालक क्रूर कलह, मृत्यू, आजार इ. कारणांमुळे संगोपनास असमर्थ आहेत अशा कुटुंबातील बालकांसाठी अल्प व दिर्घ कालावधीसाठी पर्यायरी कुटुंबात संगोपनासाठी देण्यात येते.

निष्कर्ष :- सरकार आज संपूर्ण देशामध्ये महिला व बालकांच्या कल्याणासाठी विविध योजना राबवित असल्यामुळे महिला व बालकांच्या आर्थिक व सामाजिक परीस्थिती सुधारण्यास मदत झाली आहे.

संदर्भ सूची -

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जनसंपर्क आणि स्थानिक स्वराज्य संस्था - सौदागर जाधव.
महिला व बालकल्याण योजनेची पुस्तिका.
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नगरपालिका	एकूण लाभार्थी 2015–2016	निवडलेले लाभार्थी 5 टक्के	नगर पालिकांचा दर्जा
संगमनेर	1,364	68	ब
श्रीरामपूर	1,525	76	ब
राहाता	400	20	क
श्राहूरी	600	30	क
कोपरगाव	1,228	61	ब
एकूण	5,117	255	

स्त्रोत – क्षेत्रीय पहाणी

अहमदनगर जिल्ह्यातील नगरपालिकांच्या प्रमुख योजना –नमुना निवड केलेल्या नगरपालिकांच्या महिला व बालकल्याण विभागाव्दारे वेगवेगळ्या योजना राबविल्या जातात त्या योजना पुढीलप्रमाणे –

1. महिला **व्यवसाय प्रशिक्षण** – नगरपालिकांमधील महिला व बालकल्याण विभागांतर्गत महिलांना व्यवसाय प्रशिक्षण दिले जाते. त्यात ब्युटी पार्लर कोर्स, शिवण क्लासेस, फेब्रीकेशन, कॉम्प्युटर क्लासेस, त्याच बरोबर चिक्की पापड बनविणे अशा प्रकारे प्रशिक्षण दिली जातात. त्यात प्रामुख्याने विधवा व अदिवासी महिलांना विशेष सवलती दिल्या जातात.
2. **स्वयंरोजगार योजना :–** या योजनेअंतर्गत बचत गट चालविले जातात. बचत गटामार्फत वेगवेगळ्या वस्तू तयार करणे. उदा. लोणची, पापड, चिक्की, हस्तकलेच्या वस्तू अषा वस्तू तयार करून महिलांना रोजगार उपलब्ध करून दिले जातात. व त्या महिलांनी तयार केलेल्या वस्तूंचे स्टॉल लावले जातात. काही महिलांना विकी परवाने दिली जातात. एखाद्या महिलेला आपल्या व्यवसायासाठी कर्ज हवे असल्यास बचत गटामार्फत कर्ज उपलब्ध करून दिले जाते.
3. **सांस्कृतिक कार्यक्रम :–** यात महिलांसाठी हळदी–कुंकवाचे कार्यक्रम घेतले जातात. त्याचबरोबर रांगोळी स्पर्धा, मेहंदी स्पर्धा, वकृत्व स्पर्धा, पाककला स्पर्धा, मैदानी स्पर्धा, संगीत खुर्ची अशी वेगवेगळी कार्यक्रमे घेऊन ज्या प्रथम तीन स्पर्धक महिला असतील त्यांना रोख पारितोषिक दिले जाते. त्याची रक्कम 3 ते 5 हजार पर्यंत असते.
4. **आरोग्य तपासणी कार्यक्रम :–** या योजने अंतर्गत महिलांची आरोग्य तपासणी केली जाते. त्यात ज्या महिलांचे हिमोग्लोबिन कमी असेल तर त्यांना औषधे व योग्य तो आहार पुरविण्याचे कार्य केले जाते.
5. **स्त्री जन्माचे स्वागत :–**
6. **बालवाड्या चालविणे :–**नमुना निवड केलेल्या नगरपालिकांपैकी काही नगरपालिका महिला व बालकल्याण विभागांतर्गत बालवाड्या चालवितात त्यात लहान मुलांना खाऊ वाटप करणे, पुस्तक वाटप, ड्रेस वाटप केले जाते.

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7. **व्यवसायासाठी साहित्य वाटप** :– या योजनेअंतर्गत गरजू महिलांना व्यवसायासाठी वेगवेगळ्या प्रकारची साहित्य वाटप केली जातात. त्यात शिलाई मशीन, पिकोफॉल मशीन, ब्युटीपार्लरचे साहित्य, पीठाची गिरण, पापड यंत्र, शेवई यंत्र इ. दिली जातात.
8. **आर्थिक मदत** :– महिला व बालकल्याण विभागांतर्गत गरजू महिलांना आर्थिक मदत देखील दिली जाते. महिलांच्या मुलामुलींच्या लग्नासाठी आर्थिक मदत, महिलांना बचत गटामार्फत कर्ज मिळवून देणे, पॉलिसी उतरविणे अशा प्रकारच्या आर्थिक तरतूदी देखील केल्या जातात.

सारांश :– उपरोक्त माहितीवरून नगरपालिकांमार्फत महिला व बालकल्याण विभागातर्गत वेगवेगळ्या योजना राबवून स्त्रीयांचा विकास घडवून आण्ण्यासाठी प्रयत्न केल जातात त्याचबरोबर स्त्रिया स्वतःच्या पायावर उभ्या रहाव्या यासाठी स्वयंरोजगार मार्गदर्शन व महिला मंडळांव्दारे मदत केली जाते.

संदर्भ सूची :–

1. *महीला व बालकल्याण विभाग – चंद्रकांत मिसाळ*
2. *भरतीय समाज आणि सामाजिक समस्या – डॉ.भा.की.खडसे*
3. *महिला व बलकल्याण योजनेची पुस्तिका*
4. *क्षेत्रीय पहाणी*
5. *प्राथमिक माहितीच्या आधारे संकलित माहिती.*

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सेंद्रिय शेतीचे महत्त्व

प्रा. डॉ. किशोर रंगनाथ डोंगरे & प्रा.प्रविण बबनराव आहेर

श्रमिक कनिष्ठ महाविद्यालय, संगमनेर
संशोधक विद्यार्थी :एस.एम.बी.एस.टी.कॉलेज संगमनेर

प्रस्तावना : भारतासारख्या कृषीप्रधान आणि प्रचंड लोकसंख्या असलेल्या देशात अन्नधान्याचे उत्पादन मोठया प्रमाणावर वाढविणे आवश्यक आहे.हरितकांतीमुळे शेती उत्पादनात मोठया प्रमाणात वाढ घडून आली परंतु भारतीय शेतकरी रासायनिक खतांचा जास्त प्रमाणात वापर करत गेला व त्याचा परिणाम उत्पादन कमी होऊ लागले रासायनिक खतांच्या अतिवापराने जमिनी क्षारयुक्त होत गेल्या व त्याचे मानवी आरोग्यावर वाईट परिणाम दिसू लागले. कमीत कमी कालावधीत भाजीपाला व फळांचे उत्पादन कसे होईल यासाठी शेतकरी प्रयत्नशील असतात. दोन मालांपैकी फळे व भाजीपाल्याचा रंग चांगला दिसण्यासाठी इंजेक्शन दिले जाते. फळे पिकवण्यासाठी पावडर वापरली जाते ती आरोग्यासाठी हानीकारक असते आपल्या रोजच्या आहारातील फळे आणि भाजीपाला हेच धोकादायक असेल तर त्यामुळे आपल्याला विविध रोगांची लागण होऊन अनेक व्याधींना सामोरे जावे लागते यासाठी सेंद्रीय पध्दतीने पिकवलेले फळे व भाजीपाला याचा आपल्या आहारात वापर करणे अत्यंत आवश्यक आहे. सेंद्रीय शेती पध्दतीने जनक सर अल्बर्ट हॉवर्ड यांनी आवर्जुन तळमळीने सांगितले की,सेंद्रीय खतांमुळे जमिनीची सुपिकता वाढते जमिनीची सुपिकता हिच आरोग्याची गुरुकिल्ली आहे व निरोगी पिकाची उत्पादकता नेहमीच जास्त असते शेती अर्थशास्त्राचे गणित शेतकऱ्यांना जुळवायचे असेल तर सेंद्रीय शेतीशिवाय पर्याय नाही.

अभ्यासाची उदिदष्टये .

1. सेंद्रीय खतांची आवश्यकता समजुन देणे.
2. सेंद्रीय शेतीतील लोकांचा सहभागाचा अभ्यास करणे.
3. सेंद्रीय शेतीची फायदे पटवून देणे.
4. सेंद्रीय खतांमुळे पर्यावरण,आरोग्य व उत्पादन,शेतीची पोत सुधारतो हे पटवून देणे.

सेंद्रीय खताचा अर्थ

1. वनस्पती व प्राणी यांच्या अवशेषापासून जे खत तयार होते त्यास सेंद्रीय खत असे म्हणतात. उदा. शेणखत, कंपोस्ट, हिरवळीची खते, गांडुळखते, माश्यांचे खत,हाडांचे खत, तेल बियांचे पेंड इ.
2. शेतीतील पालापाचोळा, गव्हाचे काडपाचट, पिकांची धसकटे, पाने फांदया, खोड, भुस्सा, गवत, कोंबडयांची विष्ठा, डुकरांच्या लेंडया यांना कुजुन जे खत तयार होते त्यास सेंद्रीय खत असे म्हणतात.

9. पिक व पाण्याचे नियोजन होते
10. भरघोस उत्पादन वाढ दिर्घकाळापर्यंत टिकविता येते.

सेंद्रीय शेतीची गरज .रासायनिक शेतीचे मानव व पर्यावरणावर दुष्परिणाम झाल्याने अनेक समस्या उदभवतात हे शेतकऱ्यांना आणि शासनाला पटू लागले आहे. याबाबत सेंद्रीय खताचा पुरस्कार करणारे विचारवंत म्हणतात.शेतीतुन किंवा मातीतुन निघते ते परत शेतात किंवा मातीत जावे असा मार्ग शेतकऱ्यांनी अवलंबला पाहिजे पेन्सिल व्हॅनियातील जे रोडेल व कॅलिफोर्नियातील ऑलमिन ड्रकर यांनी सेंद्रीय शेती पध्दती विकसित केली.

1. सेंद्रीय शेतीमुळे चांगल्या प्रतीचे अन्न तयार होते.
2. शेतात व शेतावर उपलब्ध असलेल्या सुक्ष्म जीवाणू,प्राणी,वनस्पती,यांचा अधिक उपयोग करुन निसर्गचक्राला चालना मिळते.
3. जमिनीची सुपिकता वाढते व दिर्घकाळ टिकते.
4. मृदा व जलसंवर्धन साधता येते.
5. वारंवार पडणारे दुष्काळ यामुळे पाण्याचा अपव्यय टाळला जातो.
6. निश्चित व चिरस्थायी उत्पन्नाची हमी मिळते.
7. गाव स्वच्छता व आरोग्य राखले जाते.
8. शेतीकडे उदरनिर्वाहाचे साधन न पाहता व्यापारीदृष्टीने पाहता येते.
9. मातीचा टणकपणा कमी करण्यासाठी उपयुक्त
10. प्रदुषण मुक्त शेती व वातावरण निर्माण करण्यासाठी उपयोगी
11. शेतीसोबत शेतीपुरक व्यवसायात वाढ करुन शेतकऱ्यांचे उत्पन्न वाढते.
12. घटती जनावरे यांचा विचार करता ती वाढीस सुयोग्य वातावरण तयार होते.

सेंद्रीय शेती वाढविण्यासाठी उपाय .

1. शेतकऱ्यांमध्ये सेंद्रीय खतांविषयी जागृती निर्माण करणे.
2. सेंद्रीय खते शेतकऱ्यांजवळ उपलब्ध असलेल्या साधनांतून होतात हे माहिती करुन दिले पाहिजे.
3. सेंद्रीय पध्दतीने उत्पादन केलेले फळे व भाजीपाला बाजारात आणला पाहिजे मात्र रसायनयुक्त भाजीपाला बाजारात येणार नाही यासाठी प्रतिबंधात्मक उपाययोजना करणे आवश्यक आहे.
4. अडाणी,अज्ञानी व ग्रामिण शेतकऱ्यांना रसायनयुक्त फळे,भाजीपाला यामुळे मानवाच्या शरीरावर काय परिणाम होतात याचे प्रात्यक्षिक इंटरनेटच्या माध्यमातून दाखविले जाणे आवश्यक आहे.
5. भाजीपाला आणि फळांमधील रसायनांची तपासणी करणाऱ्या प्रयोगशाळा देशाच्या सर्वच भागात उभारल्या पाहिजे.
6. सेंद्रीय खताच्या वापराबाबत चर्चासत्र व मेळावे आयोजित करणे.

7. देशात,विदेशात सेंद्रीय खतांपासून उत्पादीत होणाऱ्या मालाला असलेली मागणी व अधिक बाजारभाव याविषयी शेतकऱ्यांना माहिती करुन टाकाऊ खत निर्माण करता येते हे पटवून दिले पाहिजे.
8. सेंद्रीय खताचा वापर करणाऱ्या शेतकऱ्यांना प्रोत्साहित करणे.
9. रासायनिक खतांचे येणारे दुष्परिणाम व सेंद्रीय खतांमुळे होणारे फायदे यांची विविध उदाहरणे माहिती करुन देणे.
10. जास्तीत जास्त सेंद्रीय खताचा वापर उत्पादन प्रक्रियेत करणेबाबत मानसिक कल बदलला पाहिजे.

संदर्भ सुची

1. *भारतीय अर्थव्यवस्था दत्त अणि सुन्दरम.एस.चन्द एण्ड कंपनी प्रा.*
2. *भारताचे काही पैल्यु एस.महेंद्रदेव के सुब्बाराव*
3. *पर्यावरण व शाश्वत विकास महाराष्ट्र राज्य माध्यमिक व उच्च माध्यमिक शिक्षण मंडळ पुणे जुन 2013*
4. *निसर्गशेती नवीदृष्टी डॉ.गोविंद काशिनाथ झेंडे सन पब्लिकेशन पुणे 2006.*

K.T.S.P MANDAL'S

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ROLE OF THE BANKING SECTOR IN INDIAN AGRICULTURE

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Prof. Dr. A.M. Pawar
Research Guide

Introduction

The Indian banking sector consists of commercial and cooperative banks. The role of both types of banks is very significant in Indian agriculture. Cooperative banks were considered as the major source of credit flow to agriculture, but with the time, commercial banks too have come forward to extend credit to agriculture. The share of commercial banks in providing credit to agriculture has increased from 49% in 1996-97 to 52% in 2000-01. But as per RBI's estimation, commercial banks are still far behind in achieving their target of providing 18% of the total credit to agriculture and allied sectors. On the other hand, the number of bank branches at rural centers has also decreased from 35,329 in 1994 to 32,481 in 2002. This has created a flutter in the ranks of the UPA government, which promised to double the agricultural credit in the next three years. The role of the banking sector in agriculture is not limited to providing credit. This article talks about the emerging roles of banking in agriculture and allied sectors and the private-public partnership (of private or public banks and government or private sectors).

Objectives of the study

1) To study Role of the Banking Sector in Indian Agriculture.

Research Methodology

Research data collected by secondary sources, secondary data collected by reports, books and internet etc. Collected data interpreted by table and chart, however, mathematical techniques are used.

Role of Banking in Agriculture

In a changing environment, banks are diversifying their role in the agriculture sector in order to get revenue from their significant contribution to agriculture. Some of the new roles that banks have adopted are: Marketing, training and consultancy, insurance and financing for infrastructure via private-public participation.

Agricultural Finance:

India is predominantly an agricultural country. About 70 per cent of the people in India depends directly or indirectly on agriculture. The financing of agriculture is the most important part of rural credit in India. The National Bank for Agriculture and Rural Development (NABARD) is the apex institute which provides direct and indirect finance to every run-corner of the country)

Kisan Credit Card Scheme

The Kisan credit card scheme was first introduced in India by Andhra Bank in 1998. The scheme aims to facilitate access to short-term credit to farmers and to

simplify the credit mechanism, so that farmers can receive credit on time. The different commercial banks, Regional Rural Banks (RRBs) and cooperative banks issue the Kisan credit card. By September 2002, 271.81 lakh Kisan credit cards had been issued, which is considered a significant achievement. Rural financial institutions are not well-integrated with agriculture support systems like R&D, Extension, supply chain and processing, and their credit policy is too crop-centric. So non-crops and other high value activities are not taken care of. Only traditional crops have credit access; most banks give out only 15% or less of their total portfolio to the agri-sector as against the mandatory 18%.

It was expected that with the introduction of the Kisan credit card, the farmers' condition will improve and they will be less dependent on moneylenders, but in reality farmers now are more dependent on moneylenders because of the lack of proper implementation of the policies laid down for the benefit of farmers and bureaucratic hurdles in getting credit from banks.

Insurance

Indian agriculture depends heavily on the monsoon. Crops often get damaged because of abrupt changes in the weather. The suicide cases of cotton- growing farmers in Andhra Pradesh arid Maharashtra are an everyday thing now. To overcome all these problems, microfinance and general insurance companies have come up with crop and weather policies which can be helpful to poor farmers. Example: Basix. one of the largest microfinance companies in India at Hyderabad, announced India's first rainfall insurance program in July 2003 with Krishna Bhima Samruddi Local Area Bank.

Training and Consultancy

The ratio of extension worker : farmers is very less, i.e., 1:1000, In this case, it is very difficult for the government to provide timely information to farmers. It is praiseworthy that many banks have volunteered to train their officers regarding farm practices, which in turn help farmers. For example, SBI Rural Development, Hyderabad. Other banks which are involved in agri-consultancy services are Canara Bank and Indian Overseas Bank (IOB). IOB provides consultancy services for agro-entrepreneurs and Canara Bank provides consultancy for high value projects like medicinal plant farming.

Kisan Credit Cards Issued and Amount Sanctioned

Agency	Cumulative progress upto September 2002		
	Card Issued (in Lakhs)	Share (%)	Amount Sanctioned (Rs. cr)
Cooperative Bank	175.85	64.69	40333.01
RRBs	21.20	7.79	5211.43
Commercial Bank	74.76	27.52	18521.13
Total	271.81	100.0	64065.57

Warehousing by Banks

Vegetables, fruits and flowers are perishable in nature and these need the best environment, so that their life can be increased. To make these perishable goods

ivailable throughout the year, it is important to have the required environment. To cater to such needs, banks like Rabo Bank (India) Limited and National Housing Sank are actively involved in financing the construction of cold storage.

Agri-Clinics

The Government of India has formulated a scheme to help agriculture graduates establish "agri-clinics" to provide assistance to farmers regarding soil testing, post harvest management and technology. NABARD has come forward in this regard and will facilitate bank credit on priority sector lending erms. NABARD acts as the facilitator in providing he loans based on the appraisal of the projects. The oan amount varies from Rs. 5 lakhs (in case of individual) to Rs. 50 lakhs. As per RBI guidelines, there will not be any collateral ecurity on the loan amount of Rs. 5 lakhs.

Several banks, like Indian Bank, have come up with a scheme to provide loans for establishing agri-clinics and agribusiness centers. The loan amount varies from the interest rate of 9.5% to 11.0%. However, the rate of interest is so high that it makes farmers think twice before availing the loan facility. This high rate of interest must be reduced. However, the agri-clinic model attempts to involve agriculture graduates and it is a win-win situation for everyone: The Government of India, the agriculture graduates and the fanners.

Conclusion

The above existing and new models are only indicative. The need of the hour is to leverage the existing resources and make banks more participative through policy implementation and create a conducive environment so that the agriculture sector can be cared for like any other sector. Even the existing and conducive policies are enough if they are properly implemented. Both private and public sectors are contributing to agriculture in a big way. However, there are many things that have to be implemented, especially financing aspects.

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3. www.indianbanking.com

॥ प्रज्वालितो ज्ञानमयः प्रदीपः ॥

शिक्षण प्रसारक संस्थेचे,

शिक्षणशास्त्र महाविद्यालय, संगमनेर, जि.अहमदनगर.

सावित्रीबाई फुले पुणे विद्यापीठ गुणवत्ता सुधार कार्यक्रमा अंतर्गत संयुक्त विद्यमाने आयोजित

राज्यस्तरीय चर्चासत्र

गुणवत्तापुर्ण शिक्षणासाठी गुणांकन दर्जा आणि अधिस्विकृती : गरज आणि आव्हाने

RANKING & ACCREDITATION FOR QUALITY EDUCATION: NEED & CHALLENGES

मंगळवार, दि. 30 जानेवारी, 2018

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NEED OF ACCREDITATION & CHALLENGES.

Prof. Wakchaure Shital Prabakar
Nutan Arts, Commerce & Science College, Rajapur

Introducation –

(Higher education or degree course matters a lot in a students life. His/her fulure is dependant on the degree.) The quality education is related with the name of college or university & its accreditation. In the most rigorous stage of life, (education must help the students to be independent & financially secured. These aims can be achieved through quality education) Thus (for maintaining quality, we need its continuous observation, evaluation, guidance & supervision.)

Objectives –

1. To understand the concept of accreditation.
2. To understand the need of accreditation in higher education.
3. To know & understand the challenges in the 21st century.

Concept of Accreditation-

(Accreditation is a voluntary activity initiated by the institution that requires a strict self-evaluation) and an independent appraisal of the overall educational quality. Accreditation emphasizes quality assurance & a commitment to continuous quality enhancement. To achieve accreditation by the authority is very important for colleges and universities. (It will create a stamp of quality on the name of the college, institute or university. Accreditation in higher education is a process based on self & peer assessment.) Its purpose is the improvement of academic quality and public accountability. Accreditation is the outcome of a process by which a governmental, parastatal or private body evaluates the quality of a higher education institute as a whole or a specific higher education programme : Accreditation is the action or process of officially recognizing someone as having a particular status or being qualified to perform a particular function . Accreditation is a concept based on self regulation which focuses on evaluation and the continuing improvement of educational quality. The accreditation process ensures that their certification practices are acceptable & competent to test and verify and employ suitable quality assurance.

https://wikipedia.org.in

Need of Accreditation-

(Accreditation is needed to arrange periodic assessment and accreditation of institutions of higher education or units for academic programmes) It is needed (to stimulate the academic envirommenf for promotion of quality of teaching – learning & research, It is needed for encouraging self evaluation) and bringing (new trends & innovations in higher education.) It is helpful in studies regarding quality development, consultancy & training. To Co-ordinate among other bodies regarding quality evaluation & accreditation (It helps the students to defermine acceptable institutions for enrollment.) It helps employers to determine the validity of programmes of stude & whether a graduate is qualified. Employers require evidence that applicants have received a degree from an accreditated college or the course of study. (It involves staff, faculty, students , graduates and advisory board to come forward and play an important role in planning & evaluation .) It provides a self – regulatory alternative for the state or central government. Accreditation is considered to be the highest possible academic standards.

Accreditation is an assurance to the student that (College has qualified professors, offers approved programmes of study, has adequate equipment & technology which operates on sound financial basis & ufilizes approved recruitment & admission policies.) Accreditation is an assurance

of quality. In the field of education an accreditated college or university must verify th programmes & administrative processes meet standards established & approved by accre agencies.

Accreditation ensures that the educational programmes & outcomes offered meet the h standards. Accreditation functions as a means to validate the quality of the programmes & se they provide. (It is helpful in protecting students rights, advance students success & result in educated, qualified graduates.) Accreditation is a process of validation in which colleges, univer & institutes of higher learning are evaluated, accreditation helps the institute to judge leaderships. (It helps to improve the work system & work process of the institutions.)

It is needed for institutions to evaluate critically their vision, strategies, priorities, leade programme & resources. It forces the institute to move in a direction towards excellence.

Challenge

Quality is the main target of higher education. (Quality achievement is not possible w continuous evaluation, internally & externally. It is a planned activity towards the goal. It is a p of self-study, self-analysis & self-interpretation.) (The maintainence of quality continually challenge.) in front of the educational institution. Just making a quality is not enough, but it n be maintained without fall throughout the academic & administrative performances of an insti Today, higher education faces more scrutiny & questioning about its performance, as a resul greater demands form citizens.) A process of accreditation is long & involves the entire insti the (investments must be regarded as part of a long-term improvement) (Human res finance, teaching & research are units that normally work in isolation.) As an accreditation p looks for integration, to achieve collaboration can take a while, (Accreditation can become a burden for staff & teachers who must invest an important amount of time.)

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https://www.u-planner.com

SOCIAL MEDIA: ADDICTION, SYMPTOMS

Prof.Wakchau
Nutan Arts, Commerc

Introduction – Modern lifestyle has changed man's life. Modern technology h comfortable & increased life – span But the other side is negative impact of th gifted man modern way of communication. Social media has become now generation is using social media for their benefits. The speed of life is increased dominated our life. The excessive use of social media is now turning towards addic

Objectives :- 1) To understand the concept of social media addiction
2) To understand the symptoms of social media addiction.
3) To know & understand how to treat & cure social media addiction.

Keywords:-

Addiction – People become habituated to drug or alcohol to escape, relax or reward problems or difficult situations As people cannot cope with situations or mental avoid it with the use of drugs. First this may happen accidently. But after sometime habit which is considered addiction. It is the repeated involvement with a substance the substantial harm it though the involvement is pleasurable.

The excessive use of social networking sites such as facebook, twitt considered to be social media addiction . In this modern world, man is feeling cut family, friends, relatives, native place & childhood. So he feels lonely & scare belonging in the use of social media. Slowly this is turning towards addiction. People for communication, for getting knowledge, time pass & enjoyment. When the social m human relations, academic achievement, communication, mental health & loneliness

Everyone must cheek the symptoms of social media addiction. They are as follo

1) Wasting time in looking at nonsense thing on social media
2) Check notifications all the time
3) Want to talk on social media rather than actual & face to face talking
4) Constantly monitor the "likes" & "Shares" received
5) Feeling restless for internet connection
6) Every time clicking photos & posting them on social media
7) Experiencing less satisfaction & less happiness
8) Promote or increase jealousy
9) Raises anxiety level
10) Distraction & decrease productivity
11) Fatigue & stress

As, psychologists have studied & shown that 1.13 billion persons are active on face are spending 50 min daily on facebook. They have shown that people spent only 19 mi only 17min in exercising.

First of all, find out the seriousness of the addiction. Whenever the excessive use of affect human behavior, then we must consider it addiction. Many teenagers prefer which turns into addiction. Another reason is missing of human relationship in family

Treatment : treatment to this addiction starts with acceptance that the person is addi control their habit to check the notifications. They must prepare their own time sched

Memorandum of Understanding

This Memorandum of Understanding (MOU) is with regards to conducting of Vocational Online Training on Tally Prime, Advance Excel & Taxation at **Nutan Arts, Commerce and Science College, Rajapur**

Department of Commerce

For the year of 2021-22

By and between

Nutan Arts, Commerce and Science College, Rajapur, duly Registered under Pune University, having its registered office at Sangmner, Ahmednagar, Rajapur-422605, herein after referred as "**PSSNUTAN"** which is located in Rajapur and

Satyam Institute of Tax Accountant, an Educational Institute duly registered under MTSTS (**ATC-EMC Registration Number –MTSTS/ATC/2016/330**), ,having its office at 104, Ambika Heritage, Plot No – 63, Sector-17, Kalamboli, Panvel hereinafter referred to as "**Satyam**"

WHEREAS:

PSSNUTAN affiliated to Pune University, Kolhapur engaged in the activity of providing Degree Education

Satyam is engaged in Educational Institute providing Vocational training of Accounts & Taxation by the MTSTS and providing employment opportunities to the trained students

1. **Purpose**

1.1 Appointment

PSSNUTAN hereby appoints Satyam for the term of this MOU and subject to terms and conditions hereof for conducting Free online Training and Satyam hereby accepts such appointment in accordance with the terms and conditions of this MOU.

1.2 Activities

Satyam shall conduct the following activities under the programs

- Provide the following Free Vocational certification training programs approved by Maharashtra Technical & Self Employment Training Society

Courses

1. Tally Prime (Duration :- 30 hrs)

1.3 Relationship

This MOU shall not be deemed to create any employer/employee, nor any agency, and Franchise or joint venture partnership relationships between the parties.

2. Confidentiality

Satyam undertakes to keep and maintain a complete confidentiality on the knowledge and understanding acquired while running the program at college and shall not divulge any such information or material to a third party other than the Data required for placement of the trained candidates.

3. Certificate Fees

- **Tally Prime (Fees Rs.- 700)**
- **Advance Excel (Fees Rs.- 700)**
- **Tax Expert 2 (Fees Rs.-1200)**

4. Exams & Certification

- Exam will be conducted on modular basis. At the end of every module students need to complete final exam of that respective module
- Exams will be Conducted by Satyam
- Examination will be of each and every module for 100 marks out of that 40 marks passing
- After successfully completion of all modules, students will receive certificates within 1 month from completion of course from MTSTS

5. Fees Terms

- Certificate Fees paid by student will not be refundable under any circumstances
- **Fees will be collected by College through Cash and provide SATYAM after receiving the full fees from students**
- Fees once paid is not transferrable to any other student

6. Batch and Class Duration

Course will conduct Online via Google Meet

7. Satyam Responsibility:-

8. Both parties shall not use the name and brand of the other party in any advertisement or make any public announcement without the prior written approval of the other.

9. Satyam Institute of Tax Accountant will be timely provide report of students' progress and course completion to the College
10. All the details and information of students will be kept confidential.
11. For online courses a college share will be decided on no profit as covid19 pandemic ,

This MOU is at will and may be modified by mutual consent of both the parties. This MOU shall become effective upon signature by the authorized signatories from both the parties and will remain in effect until modified or terminate by any one of the parties or by mutual consent.

Signed
By Proprietor
Satyam Institute of Tax Accountant

Satyam Institute Of Tax Accountant Navi Mumbai

_____ Date

(Signature)

Signed

By Principal
Nutan Arts, Commerce and Science College, Rajapur

Nutan Arts, Com. & Sci. Senior College Rajapur, Tal. Sangamner Dist. Ahmednagar PU/AN/A 69/2002 TD/No.

_____ Date

13/6/2022

Principal
Nutan Arts, Com. & Sci. Senior College
Rajapur, Tal. Sangamner Dist. Ahmednagar-422605

(Signature)

By HOD
Department of Commerce
Nutan Arts, Commerce and Science College, Rajapur

social media. They must try to reduce the use of time span. In the last stage treatment centers, friends & family members should try to handle the addicted with different means of communication. They must focus on face to face communication

Some other strategies com also help to reduce social media addiction .e.g turning off the sound function, A person must decide no – screen time to reduce the use of social media . Even governments & organizations can help to minimize use of social media e.g banning smartphone use while driving. The treatment must be funded with insurance

Conclusion – So, in this way the research paper has just put forward the concept of social media addiction, how to identify it & how to cure it

Ref.

www. netaddiction.com
www. washingtonpost .com
https:// www.mentalhelp.net

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सार्वजनिक क्षेत्रातील बँकांचे पुर्नभांडवलीकरण

डॉ. संगिता रामेश्वरलाल जांगिड
अर्थशास्त्र विभाग
नुतन कला, वाणिज्य व विज्ञान महाविद्यालय, राजापुर
E-mail - sangitajangid@gmail.com

प्रस्तावना -

आज भारतात सार्वजनिक क्षेत्रातील बँकांची प्रगती मोठ्या प्रमाणात झालेली आहे. वाढत्या प्रगतीबरोबरच अनुत्पादक कर्ज देखील मोठ्या प्रमाणावर वाढलेले दिसून येते. त्यामुळे या बँकांची आर्थिक परिस्थिती बिघडलेली आहे. या आर्थिक परिस्थितीवर मात करण्यासाठी किंवा या सार्वजनिक बॅकांची आर्थिक परिस्थिती सुधारण्यासाठी बँकांची पुर्नभांडवलीकरणाची गरज आहे. सरकार हे पी.एस.बी. चे बहुसंख्य भागधारक असल्याने या बँकांसाठी भांडवल जोडण्याची जबाबदारी सरकारच्या खांद्यावर येऊन पडली आहे. अनुत्पादक कर्जाचे वाढते प्रमाण यामुळे या बँकांच्या आर्थिक परिस्थितीवर प्रतिकुल परिणाम झाला आहे. त्यामुळे या बॅकांना भांडवलाची नितांत गरज भासू लागली आहे. त्यामुळे या बँकांचे पुर्नभांडवलीकरण करण्याची गरज आहे.

संशोधन विषयाची उ÷ष्टे :-

प्रस्तुत संशोधन विषयाची उ÷ष्टे पुढीलप्रमाणे

1) सार्वजनिक क्षेत्रातील बँकांच्या पुर्नभांडवलीकरणाचा अभ्यास करणे.
2) सार्वजनिक क्षेत्रातील बँकांच्या पुर्नभांडवलीकरणासाठी सरकारने केलेल्या प्रयत्नाचा अभ्यास करणे.

संशोधन पध्दती :-

प्रस्तूत अभ्यासाविषयीची माहिती संकलित करण्यासाठी दुय्यम सामग्रीचा वापर केला आहे. त्यात पुस्तके, संकेतस्थळे याद्वारे माहिती संकलित केली आहे.

सार्वजनिक क्षेत्रातील बॅकांचे पुर्नभांडवलीकरण :-

बँकांच्या राष्ट्रीयीकरणानंतर सार्वजनिक क्षेत्रातील बँकांवर संख्या मोठ्या प्रमाणावर वाढली. वाढत्या संख्येबरोबर या बँकांची आर्थिक परिस्थिती मात्र काही बदल झाला नाही. कारण या बँकांच्या सरकारचं वर्चस्व, स्वतःची निर्णय घेण्याची कमी क्षमता, अनुत्पादक कर्ज या सर्व कारणांमुळे निष्क्रीय मालमत्तेत मोठ्या प्रमाणात वाढ झाली. त्यामुळे या बॅकांचे आर्थिक आरोग्य धोक्यात आले आहे. बेसल III च्या नियमानुसार या बॅकांना उच्च भांडवलाची आवश्यकता पूर्ण करण्यासाठी निधीची आवश्यकता आहे.

सर्वसाधारणपणे पी.एस.बी. च्या पुर्नभांडवलीकरणासाठी पुढील तीन प्रमुख कारणे आहे.

1) निष्क्रीय मालमत्तेच्या वाढत्या प्रमाणामुळे भांडवलात कपात झाली आहे.
2) बेसल III च्या नियमांनुसार किंवा त्यांच्या निकषांनुसार बँकांमध्ये जास्त भांडवलाची आवश्यकता आहे.
3) अर्थव्यवस्थेतील क्रेडिटची गरज वाढविणे केवळ उच्च भांडवलाद्वारे शक्य होऊ शकते.

उच्च निष्क्रीय मालमत्ता आणि कमी मालमत्तेच्या गुणवत्तेसह भांडवलाच्या आधारावर पैसे वापरण्यासाठी अशा निधीची आवश्यकता आहे.

सन 2017-18 च्या अहवालानुसार संपूर्ण बँकींग क्षेत्रात जवळ जवळ 90% निष्क्रीय मालमत्तेसाठी स्वतंत्र खात आहे. कॅगच्या अहवालानुसार 31 मार्च 2017 रोजी पी.एस.बी.च्या जीएनपीए 2.27 लाख कोटी पासून 6.83 लाख कोटी रूपयांपर्यंत वाढल्या आहेत. 2019 पर्यंत पुन्हा 9.2 लाख कोटी रूपयांपर्यंत वाढण्याची शक्यता आहे.

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भारतातील प्रादेशिक राजकीय पक्ष आणि राजकारण

प्रा.श्री चंद्रकांत गोरक्षनाथ हारदे
राज्यशास्त्र विभाग प्रमुख
नूतन कला, वाणिज्य व विज्ञान महाविद्यालय राजापूर, ता.संगमनेर
मोबा.९७६३००८८२८

प्रास्ताविक

आधुनिक काळात विविध देशांनी वेगवेगळ्या शासनपध्दती स्विकारल्या आहेत. लोकशाही शासन व्यवस्था चालविण्यासाठी राजकीय पक्ष आवश्यक आहेत. राजकीय पक्ष म्हणजे समान राजकीय विचारांनी एकत्रित येवून शांततामय वातावरणत निवडणूकीच्या मार्गाने सत्ता प्राप्त करण्यासाठी प्रयत्नशील असलेला लोकसमुदाय म्हणजे राजकीय पक्ष होय. प्रत्येक मानवात सत्ता मिळविण्याची इच्छा असते. लोकशाही अर्थव्यवस्थेत लोक एकत्रित येवून राजकीय पक्षांची स्थापना करुन सत्ता मिळविण्यासाठी निवडणूकीत सहभागी होतात.

भारताने संसदीय लोकशाही शासन व्यवस्था स्विकारली आहे. भारतात संविधानाने नागरिकांना राजकीय पक्ष किंवा संघटना स्थापन करण्याचा मुलभूत हक्क दिला आहे. स्वातत्र्यपुर्व काळातच येथे राजकीय पक्षांची स्थापना आलेली होती परंतु त्या काळात स्वातंत्र मिळवणे हेच ध्येय राजकीय पक्षांचे होते. स्वातंत्र्यानंतर अनेक राजकीय पक्षांची निर्मिती झाली यातून लोकशाहीची बहुपक्ष पध्दती अस्तित्वात आली आहे.

भारतात सद्यास्थितीत निवडणूक आयोगाकडे नोंदणी केलेले सुमारे १६०० पेक्षा जास्त राजकीय पक्ष आहेत. या राजकीय पक्षांची निवडणुकीतील कामगिरी पाहून राष्ट्रीय पक्ष प्रादेशिक पक्ष व स्थानिक पक्ष असे प्रकार पडतात.सध्यास्थितीत भारतीय राजकारणात प्रादेशिक पक्षांनी लोकशाहीला वेगळे वळण दिले आहे.

प्रादेशिक पक्ष - एक किंवा दोन घटक राज्यापुरता मर्यादित असलेला प्रभावी राजकीय पक्ष म्हणजे प्रादेशिक पक्ष होय. उदा. शिवसेना, मनसे इ. प्रादेशिक पक्षांचा प्रभाव हा विशिष्ट प्रदेशापुरता मर्यादित असतो.

- निवडणूक आयोग प्रत्येक निवडणुकीतील कामगिरी पाहून राजकीय पक्षांना दर्जा बहाल करते. प्रादेशिक पक्ष म्हणून मान्यता मिळण्यासाठी राजकीय पक्षांनी खालील निकष पुर्ण केले पाहिजेत.

- निकष

१) त्या राज्याच्या विधानसभा निवडणूकीत त्या पक्षाला वैध मतांपैकी कमीत कमी 6 टक्के मते आणि एकूण जागांपैकी कमीतकमी ०२ जागा मिळाल्या पाहिजेत किंवा

२) लोकसभा निवडणूकीत त्या पक्षाला वैध मतांपैकी कमीत कमी ०६ टक्के मते आणि एकूण जागांपैकी कमीत कमी ०१ जागा मिळाली पाहिजे किंवा

३) विधान सभा निवडणूकीत त्या पक्षाला २५ जागांमागे ०१ जागा मिळाली पाहिजे किंवा

४) लोकसभा निवडणूकीत त्या पक्षाला २५ जागांमागे ०१ जागा मिळाली पाहिजे किंवा

५) विधानसभा किंवा लोकसभा निवडणूकीत त्या पक्षाचा वैध मतांपैकी कमीत कमी ०८ टक्के मते मिळाली पाहिजेत.

वरील पैकी एक निकष पुर्ण करणाऱ्या राजकीय पक्षाला निवडणूक आयोग प्रादेशिक राजकीय पक्ष म्हणून मान्यता देते. सद्यस्थितीत भारतात ५८ पेक्षा अधिक प्रादेशिक राजकीय पक्ष आहेत.

- प्रादेशिक पक्षांच्या उदयाची कारणे : -

१) प्रादेशिक अस्मिता - प्रादेशिक अस्मिता जोपसण्यासाठी विविध प्रादेशिक पक्षांची निर्मिती झाली आहे. आपण इतर राज्यांपेक्षा वेगळे आहोत. हे वेगळेपण जोपासण्यासाठी या राजकीय पक्षांची निर्मिती होते. उदा. द्र.मु.क, आसम गण परिषद इ.

२) भाषा :- भारतात घटक राज्यांची निर्मिती भाषेच्या आधारावर झाली आहे.भाषिक अस्मिता जोपसण्यासाठी राजकीय पक्षांची निर्मिती झाली आहे. उदा. शिवसेना, मनसे

३) धर्म - भारतामध्ये विविध धर्माचे लोक राहतात. धर्माच्या संरक्षण व संवर्धनाकरीता राजकीय पक्षांची स्थापना केली जाते.

उदा. इंडियन मुस्लिम लीग, ए.आय.एम.एम.इ.

४) संस्कृती : भारतात सांस्कृतीक विविधता आहे. विशिष्ट भौगोलिक प्रदेशात विशिष्ट संस्कृती असते. या संस्कृतीच्या संरक्षण व संवर्धनाकरीता राजकीय पक्षांची स्थापना होते.

५) विकासातील विषमता - भारतामध्ये काही राज्ये विकसीत आहेत तर काही मागासलेले आहेत. मागासलेल्या राज्यांमध्ये विषमतेची जाणीव होते. यातून आपल्या प्रदेशाच्या विकासाकरीता राजकीय पक्षांची निर्मिती होते. उदा. ते.रा.स.

६) विशाल भुप्रदेश - भारताचा भू-प्रदेश विशाल आहे. यामुळे राष्ट्रीय पक्षांना सर्व प्रदेशाच्या समस्या व प्रश्न सोडविणे अशक्य आहे.यातून विशिष्ट भूप्रदेशात राजकीय पक्षांची स्थापना झाली.

७) प्रचंड लोकसंख्या- भारताची लोकसंख्या प्रचंड आहे. या प्रचंड लोकसंख्येला राष्ट्रीय पक्षांना राजकीय सहभाग देणे शक्य नाही

८) स्थानिकांना न्यायः- काही घटक राज्यांत लोकांचे स्थलांतर झाले. यामुळे स्थलांतर झालेल्या भागात अनेक समस्या व प्रश्न निर्माण झालेत यामुळे स्थानिकांना न्याय मिळवून देण्यासाठी राजकीय पक्षांची निर्मिती झाली. उदा. शिवसेना, म.न.से.

९) राजकीय पक्षाची फाटाफुटी - राजकीय पक्षांतील नेत्यांमध्ये काही कारणामुळे संघर्ष निर्माण झालेत त्यामुळे राष्ट्रीय पक्षांमध्ये फुट पडली. त्या पक्षांचे विभाजन होवून प्रादेशिक पक्षांची निर्मिती झाली. उदा. जनता दलातील फुट

१०) काही राजकीय नेत्यांना पक्षावर आपले पुर्ण नियंत्रण पाहिजे, स्वतःचा पक्ष पाहिजे या जाणिवेतून त्या नेत्यांनी स्वतःचे राजकीय पक्ष स्थापन केलेत. उदा. म.न.से

११) राष्ट्रीय पक्षांचे दुर्लक्ष- राष्ट्रीय पक्षांनी जनतेच्या प्रश्नांकडे दुर्लक्ष केले स्थानिक नेत्यांचे खच्चीकरण केले यातून प्रादेशिक पक्षांची निर्मिती झाली. उदा. केरळ काँग्रेस

अशा प्रकारे भारतातील प्रादेशिक पक्षांच्या उदयाची कारणे आहेत.

- प्रादेशिक राजकीय पक्षांची वैशिष्ट्ये

१) हे पक्ष विशिष्ट राज्य किंवा प्रदेशापुरते मर्यादित असतात.

२) हे पक्ष राष्ट्रीय राजकारणापेक्षा प्रदेशाच्या राजकारणाला जास्त महत्त्व देतात.

३) प्रादेशिक पक्ष राष्ट्रीय स्तरावर सत्ता मिळवू शकत नाही. त्याकरीता ते इतर पक्षांना पाठिंबा देतात.

४) हे पक्ष घटक राज्यात सत्ता मिळवंण्याचा प्रयत्न करतात.

५) प्रादेशिक अस्मिता जोपासून व लोकांना भावनिक आव्हान करुन सत्ता मिळविण्याचा प्रयत्न करतात.

६) या पक्षांचे नियंत्रण पक्ष प्रमुखांच्या हातात असते.

७) पक्षामध्ये विभूती महात्म्य वाढते.

८) पक्ष प्रमुख बदलल्यानंतर पक्षाच्या ध्येय धोरणात बदल होतो.

९) प्रादेशिक पक्षांचे वर्चस्व 1967 नंतर वाढत गेले:

१०) शक्तिशाली नेतृत्व हे प्रादेशिक पक्षांच्या यशाचे मूळ आहे.

११) केंद्र व राज्य यांच्या संघर्षातून अनेक प्रादेशिक पक्षांची स्थापना झाली आहे.

स्वातंत्र्यापासून प्रादेशिक पक्षांची संख्या सातत्याने वाढत आहे. प्रत्येक निवडणूकीत ही संख्या वाढत गेली आहे ती पुढील प्रमाणे

अ.नं	निवडणुकीचे वर्ष	राष्ट्रीय पक्ष	प्रादेशिक पक्ष
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१५	२०१४	०६	४८

- **प्रादेशिक राजकीय पक्षांचे राजकारण :-**

भारतात प्रादेशिक पक्षाची स्थापना स्वातंत्र्यपुर्व काळापासून झाली आहे. सुरुवातील संपुर्ण भारतात काँग्रेस पक्षाचा विस्तार झालेला होता. काँग्रेस पक्षाचे स्वातंत्र्य चळवळीतील योगदान व दिव्यवलयांकित नेतृत्व यामुळे काँग्रेस पक्षाला सर्वत्र यश मिळत होते. संपुर्ण देशावर काँग्रेसचे एकहाती वर्चस्व होते या वर्चस्वाला काही घटक राज्यातून विरोध होवू लागला. केंद्रीय नेतृत्वाला घटक राज्याचे प्रश्न सोडविला आले नाही. १९६७ नंतर क्राँगेसला मोठ्या प्रमाणत विरोध होवू लागला. अशीच परिस्थिती इतर राजकीय पक्षांची होती. भारतात

भाषेच्या आधारावर घटक राज्यांची निर्मिती केली. समान भाषिक एका राज्यात असल्यामुळे त्या घटक राज्यांमध्ये प्रादेशिक अस्मिता वाढू लागली. क्रॉंग्रेसवर नाराज झालेल्या नेत्यांनी या परिस्थितीचा फायदा घेवून घटक राज्यांत राजकीय पक्षांची स्थापना केली.

काही राज्यांमध्ये प्रादेशिक अस्मिता उदयाला आली होती. भाषिक अस्मिता उदयाला आली त्यातून काही राजकीय पक्षांची स्थापना झाली आहे. उदा. महाराष्ट्रात -शिवसेना, तमिळनाडूत - द्र.मु.क.पक्ष आसाम मध्ये आसाम गण परिषद इ. हे सर्व पक्ष भाषिक अस्मितेतून उदयाला आले आहेत मुंबईत स्थलांतरीतांचे आलेले लोंढे व भुमिपुत्रांची पिछेहाट या विरुध्द लढण्यासाठी १९ जुन १९६६ रोजी श्री.बाळासाहेब ठाकरे यांनी शिवसेनेची स्थापना झाली.शिवसेनेने परप्रांतीयां विरोधात लढे उभारले.

काही पक्षांमध्ये नेतृत्व वर्चस्वावरुन संघर्ष निर्माण झालेत, यातून अनेक वेळा पक्षात फुट पडली आहे. जून्या जनता दल या पक्षात नेतृत्वावरुन संघर्ष झाला व त्या पक्षाचे फुट पडून जनता दल (एस) जनता दल (यु), राष्ट्रीय जनता दल, बिजू जनता दल इ.पक्षांत विभाजन झाले. हे सर्व पक्ष प्रादेशिक झालेत तसेच, महाराष्टात देखिल शिवसेनेत नेतृत्वावरुन संघर्ष झाला. शिवसेनेत फुट पडली व श्री.राज ठाकरे यांनी म.न.से या प्रादेशिक पक्षाची सन २००६ मध्ये स्थापना झाली. अशाच प्रकारे इतर घटक राज्यात काही प्रादेशिक पक्षांची निर्मिती झाली.

स्वातंत्र्यानंतर सुरुवातीच्या काळात प्रादेशिक पक्ष राष्ट्रीय राजकारणात प्रभाव पाडू शकले नाहीत परंतू नंतरच्या काळात या पक्षांना यश येवू लागले. राष्ट्रीय पक्षांना घटक राज्यात यश मिळविण्यासाठी प्रादेशिक पक्षां सोबत आघाडी करावी लागली.उदा. महाराष्ट्रात भाजपने १९९० साली शिवसेनेसोबत युती केली व महाराष्ट्राच्या राजकारणात १९९५ साली सत्ता मिळवली. अशीच युती पंजाब मध्ये शिरोमणी अकाली दल या पक्षासोबत केली. राष्ट्रीय पक्षांची प्रादेशिक पक्षांमुळे पिछेहाट झाली तर काहींना आपला प्रभाव वाढविण्यासाठी प्रादेशिक पक्षासोबत युती केली.

प्रादेशिक पक्षांनी राष्ट्रीय पक्षांच्या मदतीने राज्यात सत्ता हस्तगत गेली तर राष्ट्रीय स्तरावर यांनी राष्ट्रीय पक्षांना पाठिंबा दिला त्यांच्या आघाडीत सहभागी होवून अनेक मंत्री पदे मिळविली आहेत. सद्य स्थितीत राष्ट्रीय स्तरावर भाजप प्रणित राष्ट्रीय लोकशाही आघाडी तर काँग्रेस प्रणित संयुक्त पुरोगामी आघाडी यात सत्ता संघर्ष सुरु आहे.

प्रादेशिक पक्ष हे राष्ट्रीय राजकारणात तराजु मधील छोट्या वजन मापाचे काम करतात. आपल्या मागण्या मान्य न झाल्यास ते ऐनवेळी सरकारचा पाठिंबा काढून घेतात. सन १९९९ साली अ.द्र.मु.क.च्या जय ललिता यांनी ऐनवेळी वाजपेयी सरकारचा पाठिंबा काढून घेतला. राष्ट्रपतींनी वाजपेयींना लोकसभेत बहुमत सिध्द करण्यास सांगितले. त्यावेळी वाजपेयी अवघ्या 'एक' मताने विश्वासदर्शक ठराव हरले व त्यांना राजीनामा दयावा लागला. आंतरराष्ट्रीय प्रश्नावर देखिल प्रादेशिक पक्ष प्रभाव पाडतात. उदा. श्रीलंकेतील तामिळींची बाजू भारत सरकार घेते कारण तामिळनाडूतील द्र.मु.क. व आण्णा द्र.मु.क. हे पक्ष सरकारवर दबाव टाकतात.

राष्ट्रीय सरकारे काही वेळा प्रादेशिक पक्षांची गळचेपी करतात. अशा वेळी केंद्र व राज्य संघर्ष वाढतो. केंद्र सरकार राज्याच्या कारभारात हस्तक्षेप करते.उदा. कावेरी पाणी वाटप संघर्ष केंद्र व राज्य संबंधत कलम ३५६ हे वादाचा मुद्दा आहे. या कलमाचा वापर करुन केंद्र सरकार घटक राज्यातील विरोधी सरकारे पाडण्याचा

प्रयत्न करत असते. असा प्रयत्न 39 पेक्षा जास्त वेळा झाला. आहे. तसेच केंद्र सरकार राज्यांच्या मागणीकडे दुर्लक्ष करत असते. कमी प्रमाणात आर्थिक मदत देणे, प्रादेशिक पक्षात फोडातोडीचे राजकारण करणे, राज्यांच्या मागणीकडे दुर्लक्ष करणे इ. कारणामूळे केंद्र व राज्य संघर्ष होतो. या संघर्षामुळे लोकशाही व्यवस्थेवरील लोकांचा विश्वास कमी होत आहे. तसेच भारताच्या विकासाला खिळ बसत आहे.

- **प्रादेशिक पक्षांचे औचित्य**

आज प्रादेशिक पक्षांना नकारात्मक दृष्टीकोनातून लोक पाहतात. भारताच्या एकात्मतेला व अखंडतेला धोका असल्याचा प्रचार करतात. परंतु सकारात्मक दृष्टिकोनातून पाहिल्यास यात कमी प्रमाणात तथ्य दिसते. कारण द्र.मु.क. अकालीदल, अ.द्र.मु.क. नेशनल कॉन्फरन्स इ. पक्षांनी वेळोवेळी राष्ट्रीय आघाडीत सहभागी झाले आहेत. विघटनवादी शक्तींना या पक्षांनी विरोध केला आहे. घटक राज्यातील प्रश्नांची जाणिव प्रादेशिक पक्षांना चांगल्या प्रकारे असते. तसेच या पक्षांनी लोकांना मोठ्या प्रमाणात राजकीय सहभागाची संधी उपलब्ध करुन दिली आहे. यातून लोकशाहीला चालना भेटली आहे. राष्ट्रीय पक्षांच्या हुकुमशाहीला या पक्षांनी पायबंद घातला आहे.

केंद्र सरकारने प्रादेशिक पक्षांनी सौहार्दाचे संबध ठेवावेत वेळोवेळी त्यांच्या मागण्या पुर्ण कराव्यात. कलम ३५६ चा गैरवापर केंद्राने थांबवावा प्रादेशिक पक्षांचे खच्चीकरण करु नये तसेच फोडातोडी राजकारण करु नये. प्रादेशिक पक्षांनी देखिल राष्ट्रीय सरकारचा ऐनवेळी पाठिंबा काढून घेवू नये पाठिंबा काढून घेण्याचा दबाव सरकारवर टाकू नये राष्ट्रीय सरकारला अडचणीत आणू नये. भारतीय लोकशाही यशस्वी करायची असेल तर राष्ट्रीय पक्ष व प्रादेशिक पक्ष यांनी एकमेकाला विश्वासात घेवून सहकार्य करणे आवश्यक आहे तरच भारताचा विकास होईल तसेच भारतीय संघराज्य टिकेल.

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Phytochemical Composition and antioxidant Activities of *Chlorophytum tuberosum* Leaf

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ABSTRACT

Under this study attempts have been made to determine the phytochemical and antioxidant potential of *Chlorophytum tuberosum* leaf as well as categorization of phenolic components by GC-MS and RP-HPLC using different tools which covers the experimental studies on phytochemical, nutritional and medicinal aspects. Detailed studies of *Chlorophytum tuberosum* leaf have been carried out using parameter of phytochemical analysis. Leaf powder has been evaluated for preliminary phytochemical screening. Phenolic fractions isolated from *Chlorophytum tuberosum* leaf extract have been characterized using GC-MS and RP-HPLC. Free radical scavenging effect using DPPH and total antioxidant evaluation by reducing power assay has been evaluated.

Keywords: *Chlorophytum tuberosum,* Phytochemical, Antioxidant, Free radical.

INTRODUCTION

Genus *Chlorophytum* (Family: Liliaceae) includes about 200 species and about 20 species recorded in Western ghat region of India; out of these about 11 species found in Maharashtra [1] [2]. Due to high saponin and carbohydrates content in root tuber different species of *Chlorophytum* 500-600.ton annual production of tuber is done [3]. While improved production techniques are continuously practiced by semi-arid tropic areas of India to increase commercial cultivation [4]. Various wild species of *Chlorophytum* in are traditionally considered as medicinal due to extensive use in many Ayurvedic, Allopathic, Homoeopathic and Unani medicines [5] [6] as chief ingredient which is used as rejuvenator, Immuno-modulator, remedy for diabetes etc. [7].

Chlorophytum tuberosum(Marathi name: Safed musali) is consider as economically important because root tubers and leafs are harvested as wild edible vegetable and Ayurvedic formulations[8]. *Chlorophytum tuberosum* is a leafy herb which grows about 30cm in height with spiral phylotaxy and fascicle tuber appearance tapering to basal side [9]. Leaves are fleshy about 2-4cm in width with undulated margin. Raceme type of inflorescence is present with white flower, incurved perianth, axillary placentation and capsule type of fruit with black seeds.

Wild Vegetables are used as a food resource by the Tribal people of Kalsubai-Harishchandragarh wildlife sanctuary located at Western ghat region of Ahmednagar district (MS) India. Different surveys are carried in study area and documentation has been published. About 22 plant species was reported as nutritionally rich wild edible plants [10]. Leaves, tubers, rhizomes, bulbils, fruits, seeds, flowers; of such wild edible plants is complementary diet during scarcity [11]. Documentation and data analysis of plants from northwest region of Ahmednagar may provide novel compounds for the treatment of different ailments and also new food species for coming generation which are available in only limited period.Documentation and ethnobotanical survey of wild edible plants carried out in different regions of Maharashtra has listed *Chlorophytum tuberosum* leaf as edible and medicinal [12][13][14].On the basis of above literature it is important to estimate phytochemical content and antioxidant activity of phenolic fractions to increase the market value and to urge local people to cultivate this plant in large scale.

MATERIALS AND METHODS

Collection and Identification of *Chlorophytum tuberosum*: *Chlorophytum tuberosum* leaves was procured from the local area of Sangamner and Akole tehsil of Maharashtra, India. Plant authentication was done at Department of Botany, S. N. Arts, D. J. M. Commerce and B. N. S. Science College, Sangamner, Maharashtra, India.

Sample Preparation: Collected *Chlorophytum tuberosum* leaves were washed with tap water and cut into small stripes with scissor and shade dried at room temperature for 15 days. The dried plant material was pulverized into fine powder using a grinder (mixer). Ground powder was used as plant sample for study.

Qualitative phytochemical assay of *chlorophytum tuberosum* leaf:*Chlorophytum tuberosum* leaves were subjected for qualitative phytochemical analysis of the various classes of active chemical constituents, using standard prescribed methods [15]. Observed results were subdivided as weak (+), moderate (++), strong (+++) and absent (-). Plant aqueous extract was prepared by boiling 20g of the sample powder in distilled water for 20 minutes. The solution was filtered through blotting paper. The filtrate was used for the phytochemical screening of active chemical constituents.

Determination of Total phenolic content and Total flavonoid content from *Chlorophytum tuberosum* leaf:
Study was carried out for total phenol content (TPC), total flavonoid content (TFC) as phytochemicals present in *Chlorophytum tuberosum* leaf.

Determination of total phenol content (TPC): Extraction and estimation of total phenol content present in *Chlorophytum tuberosum* leaf was analyzed according to the folin-ciocalteu method suggested by Cliffe*et al.* (1994) [16]. Absorbance was measured using visible spectrophotometer at 765nm wavelength. Series of Gallic acid as standard was prepared separately. Standard curve was drawn by plotting the absorbance against concentration of Gallic acid. Total phenol content was expressed in % of gallic acid equivalents (GAE) per gram.

Determination of total Flavonoid content (TFC): Total flavonoid content of *Chlorophytum tuberosum* leaf was determined by aluminium chloride colorimetric method [17][18] following the principle that "aluminium chloride forms complexes with the ortho-dihydroxyl groups in the A-ring or B-ring of flavonoids; and measured by recording the absorbance at 510nm". Standard curve was plotted with the help of rutin (200µg/ml) as standard flavonoid and expressed in milligrams of rutin equivalents per gram.

Extraction of Phenolic compounds:*Chlorophytum tuberosum* leaf powder was subjected for phenolic compound extraction[19]. Hundred grams of finely powdered plant part was soxhlet extracted with hot 80% methanol (500 ml) and filtered. Filtrate was re-extracted successively with petroleum ether (fraction I), ethyl ether fraction (DEE fraction) and ethyl acetate fraction (EA fraction) using separating funnel. Petroleum ether fraction was discarded due to being rich in fatty substances, whereas ethyl ether and ethyl acetate fractions were analyzed for free and bound flavonoids, respectively. Ethyl acetate fraction was hydrolyzed by refluxing with 7% H_2SO_4 for 2 h (for removal of bound sugars from the flavonoids). Resulting mixture was filtered. Filtrate was acetate extract thus obtained, washed with distilled water till neutrality. Ethyl ether (free flavonoids) and ethyl acetate fraction (bound flavonoids) were dried and weighed.

Gas chromatography and Mass spectrometry analysis of isolated phenolic fractions: Gas chromatography analysis was carried out using prescribed method [20][21]. The high attainable separation power in combination with wide range of the detectors employing various detection principles to which it can be coupled makes GC an important, often irreplaceable tool in the analysis at trace level of plant phytochemical compounds. The GC-MS analysis of phenolic fraction with in absolute alcohol, was performed using a Clarus 500 Perkin Elmer gas chromatography equipped with Elite-5 capillary column (5% phenyl 95% dimethyl polysiloxane) (30nm X 0.25mm ID X 0.25µmdf) and mass detector turbomass gold of the company which was operated in EI mode. Helium was the carriers gas at a flow rate of 1ml/min and the injector was operated at 290ºC and the oven temperature was programmed as follows; 50ºC at 8ºC/min to 200ºC (5min) at 7ºC/min to 290ºC (10min).Identification was based on the molecular structure, molecular mass and calculated fragments. Interpretation on mass spectrum GC-MS was conducted using the database of National Institute Standard and Technology (NIST) having more than 62,000 patterns. The name, molecular weight and structure of the components of the test materials were ascertained. The relative percentage amount of each component was calculated by comparing its average peak area to the total areas. The spectrum of the unknown component was compared with the spectrum of the component stored in the NIST library version (2005), software, Turbomas 5.2.

Quantification of phenolic components by RP-HPLC from isolated phenolic fraction of *Chlorophytum tuberosum* leaf:Mobile Phase solvent was used as acetonitrile/solvent (80:20). The gradient profile is 8% at 10 min. The column (reverse phase RP-C18, 150 mm × 4.6 mm, 5 m) was equilibrated for 15 min before injection. The flow rate was 1 ml/min and phenolic compounds were detected at 280 nm and at 320 nm. 20 µl sample of Diethyl ether and Ethyl acetate fraction of *Chlorophytum tuberosum* leaf were injected for analysis. Phenolic standards used in this study were Rutin, Benzoic acid, Salicyclic acid, Cinnamic acid, Caffeic acid, Naringin, Syringic acid, Hesperidin and Quercetin.

Antioxidant Activity of *Chlorophytum tuberosum* leaf fractions:
Determination of antioxidant activity by 2, 2-diphenyl-1-picrylhydrazyl (DPPH) method: Determination of DPPH scavenging activity of *Chlorophytum tuberosum* leaf phenolic fraction was carried using prescribed method [22]. Fractions were aliquot into different concentrations (12.5µg -200µg) for determining its ability to scavenge 2, 2-diphenyl-1-picrylhydrazyl (DPPH) radicals. 50µl of samples (12.5µg -200µg) were mixed with 1250µl of 0.06mM DPPH in 85% methanol. Tubes were incubated in dark for 30 minutes at RT and optimum density was measured at 517nm using visible spectrophotometer. Control was prepared by mixing 50µl of methanol with 1.25ml of DPPH

reagent. Ascorbic with dose of 1-10 µg per 50µl was served as standard to compare with fraction isolated from *Chlorophytum tuberosum* leaf.

Determination of Antioxidant Activity by reducing power assay: Determination of antioxidant activity of *Chlorophytum tuberosum* leaf was carried by reducing power assay (Khyade et al, 2017). 2.5ml of 0.2M phosphate buffer (pH 6.6) and 2.5ml of potassium ferricyanide are added to 1ml of sample dissolved in distilled water. The resulting mixture is incubated at 50°C for 20 minutes, followed by the addition of 2.5ml of Trichloro acetic acid (10% w/v). The mixture is centrifuged at 3000 rpm for 10 min to collect the upper layer of the solution (2.5ml), mixed with distilled water (2.5ml) and 0.5ml of $FeCl_3$ (0.1%, w/v). The absorbance is then measured at 700 nm against blank sample.

RESULTS AND DISCUSSION

Preliminary phytochemical analysis of *Chlorophytum tuberosum leaf*: Preliminary phytochemical analysis of *Chlorophytum tuberosum leaf* was carried out and results were denoted as High (+++), moderate (++), low (+) and absent (-).*Chlorophytum tuberosum leaf* contain high amount of steroid; moderate amount of alkaloid, tannin, anthraquinones, flavonoids and phenol; while saponins, anthocyanosides, cardiac glycosides, protein and reducing sugar in low amount (Table 1).

Table 1: Preliminary phytochemical analysis of *Chlorophytum tuberosum leaf*

Phytochemical test	Results
Alkaloids	++
Tannins	++
Saponins	+
Anthraquinones	++
Anthocyanosides	+
Cardiac glycosides (Cardenolides)	+
Steroids	+++
Flavonoids	++
Protein	+
Reducing sugar	+
Phenol	++

Note: +++ as high, ++ as Moderate, + as low, - as absent

Total Phenolic content and Total flavonoid content of *Chlorophytum tuberosum leaf*: Total phenolic content of *Chlorophytum tuberosum* leaf was observed to be 0.15% while 0.11% of total flavonoids were observed. When compared to the preliminary phytochemical test it shows that moderate amount of TPC and TFC were recorded; which indicate that sufficient amount of active phenolic compounds are present in *Chlorophytum tuberosum* leaf and should be useful against various degenerative diseases (Table 2).

Table 2. Total Phenolic content and Total flavonoid content of *Chlorophytum tuberosum leaf*

Parameter	Concentration
Total phenol Content	0.15%
Total Flavonoid content	0.11%

Separation and Identification of compounds from fraction isolated from *Chlorophytum tuberosum* leaf by Gas Chromatography and mass spectroscopy (GC-MS):*Chlorophytum tuberosum* leaf were subjected for extraction of phenolic compounds and isolated fractions (Diethyl ether and ethyl acetate) were transferred to Central Instrumentation

laboratory, Punjab University, Chandigarh for separation of compounds by gas chromatography and identified with the help of mass spectrophotometer using NIST library. Fig. 1 shows the spectra of both the fraction. Diethyl ether fraction of *Chlorophytum tuberosum* leaf shows the presence of Ethyl iso-allocholate, Perfluorotributylamine, Dodecanoic acid, 4-[N-methylureido]-1-[4-methylaminocarbonyloxymethyl, Pyrimidin-2-one, Cyclohexasiloxane, Hexasiloxane, Oleic acid, Octasiloxane, Digitoxin and 9-Octadecenoic acid (Table 3). While Ethyl acetate fraction shows major peaks of Perfluoro(dibutylmethylamine), 4-[N-methylureido]-1-[4-methylaminocarbonyloxymethyl, Perfluorotributylamine, Cyclohexasiloxane, Cycloheptasiloxane, Benzoic acid, Tetracosamethyl-cyclododecasiloxane and Phthalic acid (Table 4).

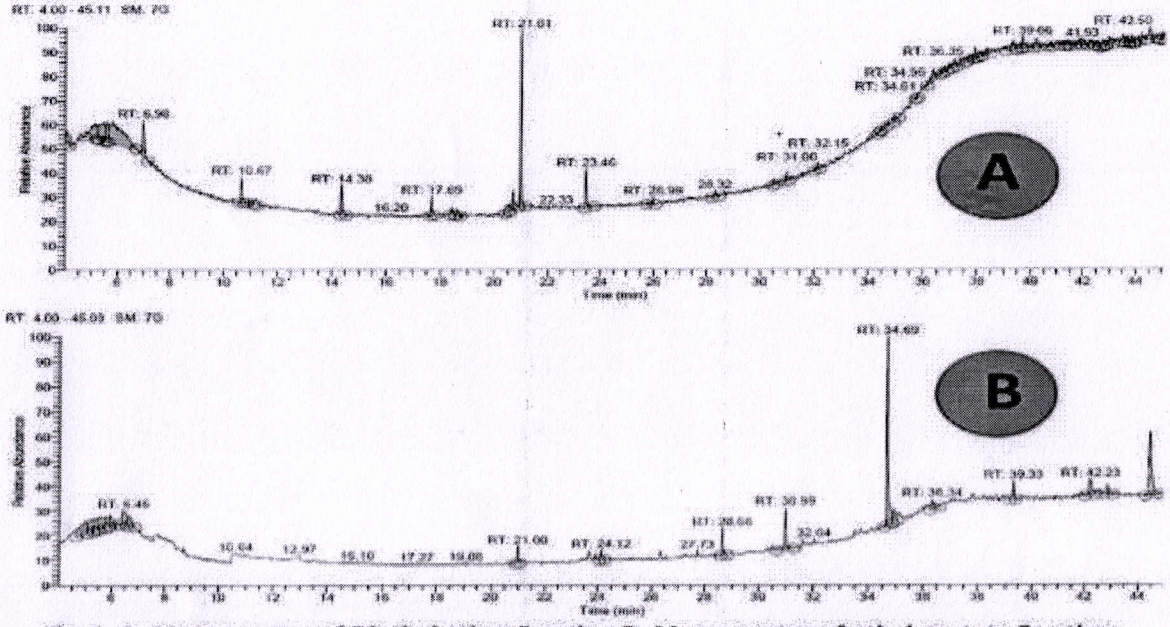

Fig. 1. A. Mass spectra of Diethyl ether Fraction B. Mass spectra of ethyl acetate Fraction

Table 3: Major compounds identified by gas chromatography and mass spectroscopy from Diethyl ether fraction *Chlorophytum tuberosum* leaf

Retention time (Minute)	Name of compound	Molecular formula	% peak area
4.07	Ethyl iso-allocholate	$C_{26}H_{44}O_5$	1.26
5.13	Perfluorotributylamine	$C_{12}F_{27}N$	4.60
5.28	Dodecanoic acid	$C_{12}HF_{23}O_2$	1.51
5.50	4-[N-methylureido]-1-[4-methylaminocarbonyloxymethyl	$C_{13}H_{19}N_5O_5$	4.65
5.61	Pyrimidin-2-one,	$C_{13}H_{19}N_5O_5$	2.43
6.98	Cyclohexasiloxane	$C_{12}H_{36}O_6Si_6$	3.88
10.67	3-Isopropoxy-1,1,1,7,7,7-hexamethyl-3,5,5-tris(trimethylsiloxy)tetrasiloxane	$C_{18}H_{52}O_7Si_7$	1.97

14.38	Hexasiloxane	$C_{14}H_{42}O_5Si_6$	2.09
17.69	Tetracosamethyl-cyclododecasiloxane	$C_{24}H_{72}O_{12}Si_{12}$	1.33
20.55	Oleic acid	$C_{38}H_{74}O_2$	1.33
20.70	Octasiloxane	$C_{16}H_{50}O_7Si_8$	2.77
21.01	Dibutyl phthalate	$C_{16}H_{22}O_4$	11.03
23.46	Digitoxin	$C_{41}H_{64}O_{13}$	3.06
36.35	9-Octadecenoic acid	$C_{36}H_{70}O2$	2.58
37.14	1-Monolinoleoylglycerol trimethylsilyl ether	$C_{27}H_{54}O_4Si_2$	1.18
37.34	1,1,3,3,5,5,7,7,9,9,11,11,13,13,15,15-hexadecamethy	$C_{16}H_{50}O_7Si_8$	1.54
37.66	Glycine	$C_{26}H_{43}NO_5$	1.05
37.88	1H-Cyclopropa[3,4]benz[1,2-e]azulene-5,7b,9,9a-tetrol	$C_{26}H_{36}O_8$	1.13
39.30	Milbemycin B	$C_{33}H_{47}ClO_7$	2.17
39.66	Octadecane	$C_{39}H_{80}O_2$	1.23
40.18	9-Desoxo-9x-hydroxy-7-ketoingol3,8,9,12-tetraacetate	$C_{28}H_{38}O_{10}$	1.26

Table 4: Major compounds identified by gas chromatography and mass spectroscopy from ethyl acetate fraction *Chlorophytum tuberosum* leaf

Retention time (Minute)	Name of compound	Molecular formula	% peak area
6.07	Perfluoro(dibutylmethylamine)	$C_9F_{21}N$	12.60
6.41	4-[N-methylureido]-1-[4-methylaminocarbonyloxymethyl	$C_{13}H_{19}N_5O_5$	8.44
6.72	Perfluorotributylamine	$C_{12}F_{27}N$	7.89
6.99	Cyclohexasiloxane	$C_{12}H_{36}O_6Si_6$	21.91

10.68	Cycloheptasiloxane	$C_{14}H_{42}O_7Si_7$	4.49
14.38	Benzoic acid	$C_{16}H_{30}O_4Si_3$	4.07
17.70	Tetracosamethyl-cyclododecasiloxane	$C_{24}H_{72}O_{12}Si_{12}$	2.56
21.01	Phthalic acid	$C_{19}H_{28}O_4$	33.32

Quantification of phenolic components from diethyl ether and ethyl acetate fraction of *Chlorophytum tuberosum* leaf by Reverse phase high performance liquid chromatography (RP-HPLC):Nine phenolic standards were subjected along with Diethyl ether and ethyl acetate fraction for RP-HPLC. Phenolic component from fractions were identified using retention time of compound (Fig.2) and quantification was done by calibration with standard peak area measurement; whereas validation for linearity was checked according to ICH guideline. Linear plots for standard phenolic components were calculated using windows Excel 2010. Diethyl ether fraction of *Chlorophytum tuberosum* leaf shows the match with four Standard Phenolic Components. Table 5 indicates that Syringic acid, Rutin, Cinnamic acid and Quercitin in 83.5µg/mg, 69µg/mg, 60.5µg/mg and 8.35µg/mg, respectively. Whereas, ethyl acetate fraction contains high amount of rutin (330µg/mg) and Syringic acid (293.85µg/mg). Equal amount of Cinnamic acid and Salicyclic acid (49µg/mg) was evaluated (Table 6). Results indicate that fractionation of extracts using polarity of solvent increases the amount of purified component.

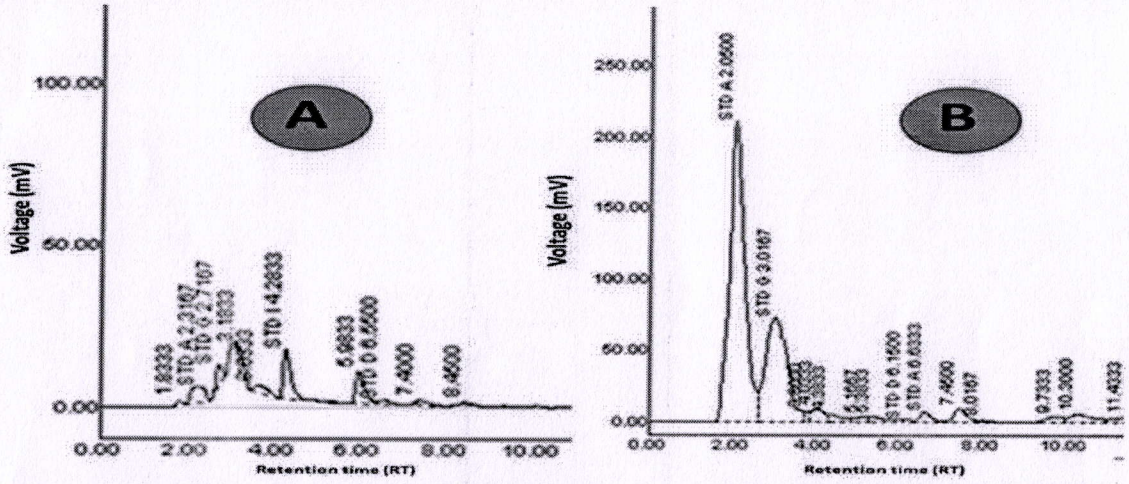

Fig. 2. A. HPLC Spectra of Diethyl ether fraction. B. HPLC Spectra of ethyl acetate fraction.

Table 5: Identification and Quantification of standard phenolic components from diethyl ether fraction of *Chlorophytum tuberosum* leaf by RP-HPLC.

Standard Phenolics	Slope line Equation	Area[mV*s]	Concentration (in µg/mg)
Rutin	y = 66.645x + 94.857	2.31	69.00
Syringic acid	y = 35.658x + 62.456	2.71	83.5
Cinnamic acid	y = 90.209x + 115.91	6.55	60.5
Quercitin	y = 65.848x + 15.311	4.28	8.35

Note: mV*s = Milivolt per second, µg/mg= Microgram per Miligram.

Table 6. Identification and quantification of standard phenolic components from ethyl acetate fraction of *Chlorophytum tuberosum* leaf by RP-HPLC.

Standard Phenolics	Slope line Equation	Area[mV*s]	Concentration (in µg/mg)
Rutin	y = 66.645x + 94.857	535.23	330.00
Syringic acid	y = 35.658x + 62.456	272.00	293.85
Cinnamic acid	y = 90.209x + 115.91	27.48	49.00
Salicyclic acid	y = 10.119x + 4.124	14.06	49.09

Note: mV*s = Milivolt per second, µg/mg= Microgram per Miligram.

Antioxidant assay of *Chlorophytum tuberosum* leaf Dietyl ether (CtuDEE) and Ethyl acetate (CtuEA) fraction:Both Diethyl ether (CtuDEE) and Ethyl acetate (CtuEA) fraction of *Chlorophytum tuberosum* leaf was subjected to DPPH assay to evaluate the Scavenging ability and reducing power assay to quantify reducing ability of both fractions. Fig.3 indicates that ethyl acetate fraction has highest ability to scavenge DPPH molecule at highest dose of 50µg and concentration of doses (10µg-50µg) shows direct proportionality with amount of inhibition(% inhibition) , which indicates that presence of different phenolic component with its concentration shows synergetic effect. Results of reducing power assay (Fig.4) prove that reducing ability of fractions and standard scavenge DPPH molecules.

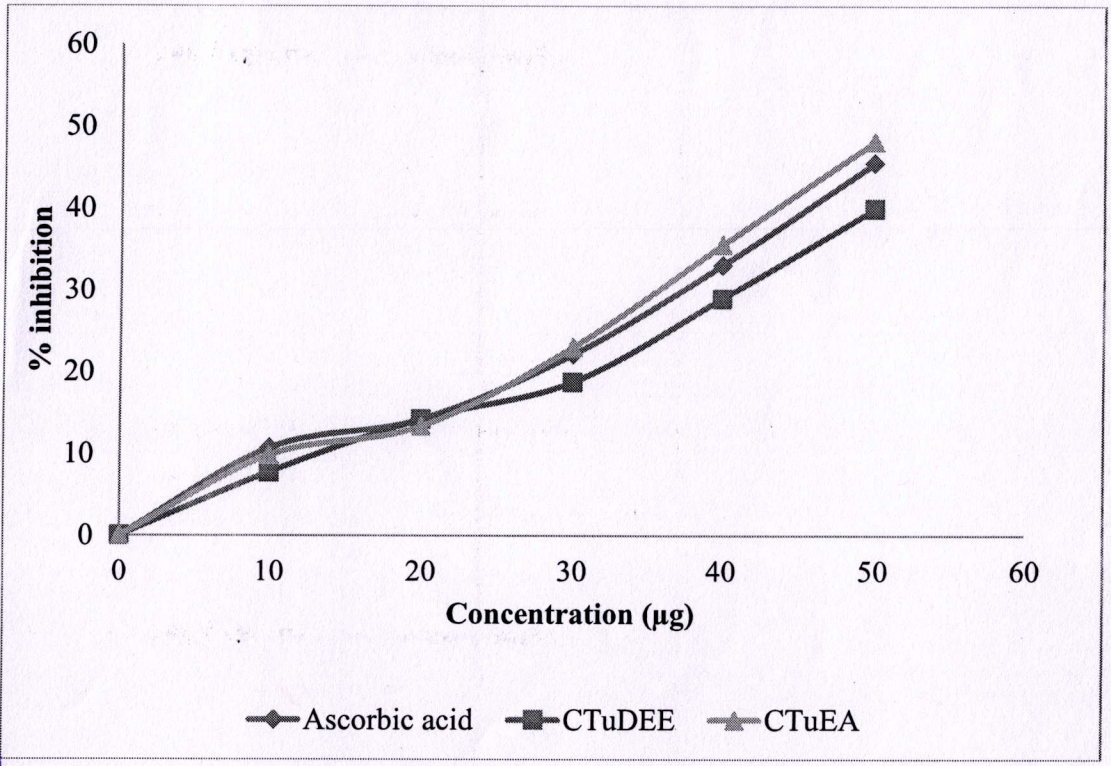

Fig. 3: DPPH antioxidant assay of *Chlorophytum tuberosum* leaf Diethyl ether (CtuDEE) and Ethyl acetate (CtuEA) fraction with Ascorbic Acid.

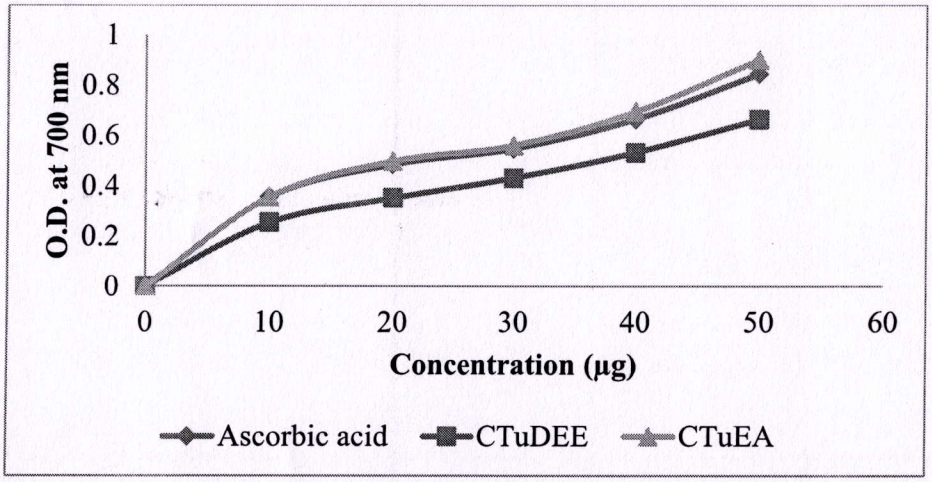

Fig.4. Reducing power assay of *Chlorophytum tuberosum* leaf Diethyl ether (CtuDEE) and Ethyl acetate (CtuEA) fraction along with Ascorbic Acid as standard.

CONCLUSION

Detailed studies of leaf for phytochemical analysis reveals that *Chlorophytum tuberosum* is an important wild vegetable consumed by tribal people.Preliminary phytochemical analysis suggests that it can be beneficial for isolation of nutraceutical components if cultivated in large scale on hilly region.Isolated phenolic components from *Chlorophytum tuberosum* leaf studied using GC-MS reveals that chromatographic separation followed by mass analysis shows different phenolic component with their mass, molecular formula and peak area gives preliminary information of chemical diversity. While quantification of some marker phenolic components via RP-HPLC shows *Chlorophytum tuberosum* leaf contains beneficial phenolic and flavonoid component.Antioxidant assays carried out using phenolic fraction reveals that it is potential for scavenging DPPH molecules while possess considerable ferric reducing ability.Present study will be important for agricultural sector to study cultivation practices for *Chlorophytum tuberosum* as well as important link in biochemical sciences.

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3- Shree Analaticals, Jalgaon.

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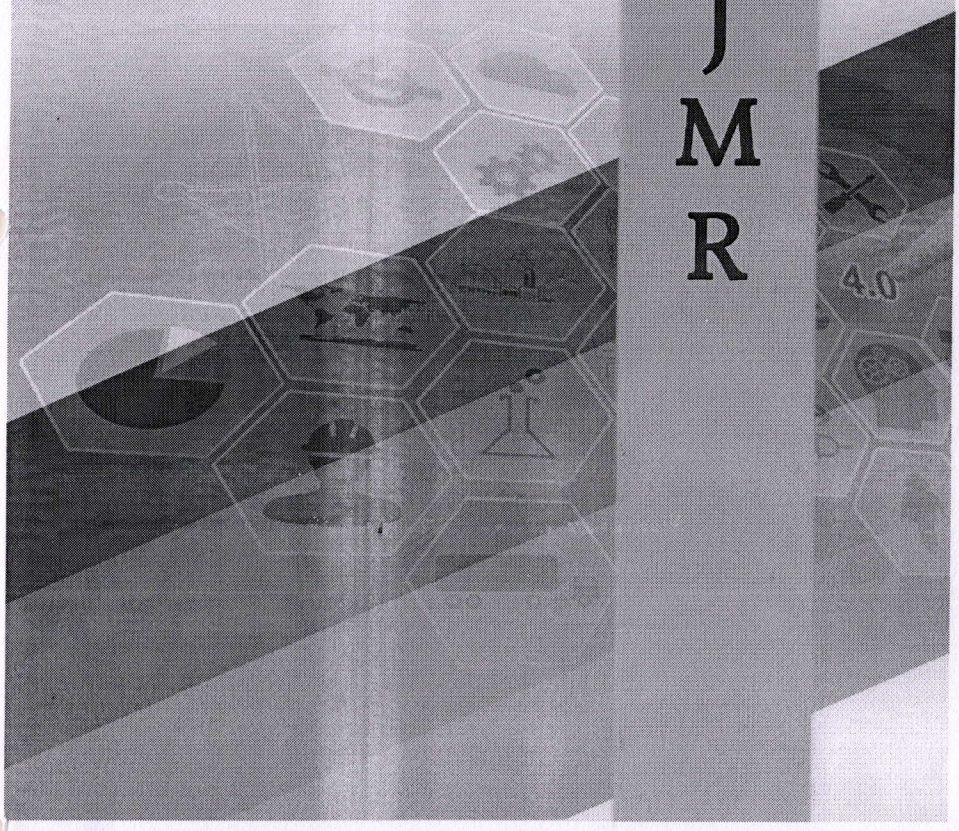

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In Vitro Organogenesis – Regeneration of Shoot From *Carthamus tinctorious*

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ABSTRACT

Callus induction and in vitro plantlet regeneration system for safflower (Carthamus tinctorious L) using root, hypocotyls first leaf ,cotyledon were optimized by studying the influence on organogenesis of seedling age, media factor, growth regulator and excision orientation.

Supplementation medium with auxin and cytokinin ratio >1 enhance growth rate of callus culture growth regulators IAA,NAA,BAP, kinetin in the medium where found effective for callus induction and regeneration in all explants .

The BAP-(5mg/l) ,NAA-(3mg/l) (5-7) explants and cotyledonary derived callus more shoots were produced on explants cut from more basal region of cotyledon from 5-7 day old seedling than from older seedlings are more distal cut side MS medium was superior to SH - M and B5.

Capitula induction was observed in both callus mediated shoots on cotyledon and shoots on rooting medium with sucrose IAA,NAA and IBA well developed plantlet were transferred to the field.

KEYWORDS: ***Carthamus tinctorious L: Safflower, organogenesis, callus, explants.***

ABBRIVATIONS: IAA: Indol Acedic acid, IBA: Indol butyric acid ,NAA: Alpha naphthalene acetic acid ,MS: Murashige and Skoog , B5: Gamborg, SH-M: Micchell and Gildow.

INTRODUCTION

Carthamus tinctorious L (Safflower) Asteraceae, is an important oil seed crop of semiarid subtropical regions average temperature of 17 - 20°C appear to be best for vegetative growth and optimum temperature for flowering is 24 to 32 °C. Safflower occupies unique position among oilseed crops and due to high content of linoleic.

The young plant is use as a leaf vegetable (Anonymous 1950) the oil seed use for industrial and edible purpose. Safflower is considered salt tolerant specially sodium salt.

Modern techniques like embryo rescue and other biotechnological tool may play an important role in overcoming such barriers. Development and cytoplasmic genetic male sterility system for hybrid breeding a successful outcome of ongoing efforts to use polyembrony for varietal improvement and confirmation of apomixes in safflower.

Flower yield and pigment content of flower have gain economic importance due to increasing countries and their use in medicine for curing several diseases. Genetic transformation of safflower to import resistance to biotic and a biotic factor in addition to development of seed with altered fatty acid and protein profiles.

In vitro plant regeneration system is basic necessity for such approaches direct somatic embryogenesis from cotyledon explants (mandal et.al. 1995) and in vitro shoot regeneration has been reported in safflower(George and Rao, 1982; (Tejovathi and Anwar 1996)
However response varies cultivar and regeneration of whole plant.

MATERIALS AND METHODS

Certified seeds of safflower (*Carthamus tinctorious* L) were obtained from National Environment Engineering Research Institute (NEERI) Nagpur ,India. Seeds were surface sterilized with 0.1 % (w/v) mercuric chloride for (HgCl2). 3 min with constant shaking followed by three washes for 1 min each in sterilized distilled

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water seeds were then germinated and grown on a sucrose (3%) agar 0.8 % under ih photo period of fluorescent light. Explants were isolated cotyledon – (15-17 mm2) from 3 to 5 days old seedlings leaf explants (15-17 mm2) were isolated from the shoot obtained in vitro from the cotyledon explants on medium supplemented with 500µl of BAP and 1250µl of NAA were added and volume was made up 250 ml by adding distilled water. Explants were transferred onto callus induction medium.

Induction and callus

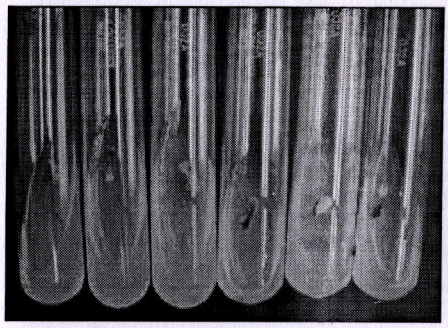
Callus induction was carried out on MS, SH-M, B5 medium supplemented with BAP and NAA either alone or in combination. After 21 days of inoculation completely differentiated dense mass of callus showing further regeneration ability were taken as a standard measure to calculate percentage of causing each regeneration step was further carried out for period of 21 days subculture onto fresh optimum callus induction .After three weeks of culture responded explants where further transferred on fresh medium containing same concentration of BAP and NAA.

Shoot induction from explants and calli (250 mg- 300mg/culture) was carried out on MS, SH-M medium containing BAP-5mg/L and NAA 1 mg/L. regenerated shoot were about 1cm and were separated from explants and callus.

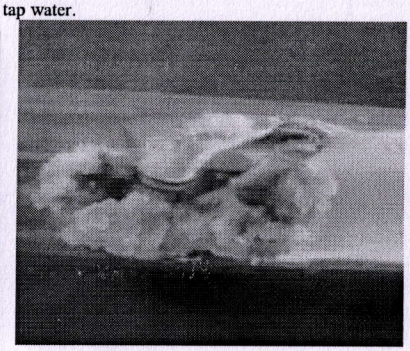
Rooting of resulting shoots (1-1.5 cm) long from explants and calli was attempted on MS SH-M, and B5 without growth regulator and with sucrose (1-9%) NAA- 5mg/L both combination of BAP- 0.25 mg/L.

Hardening

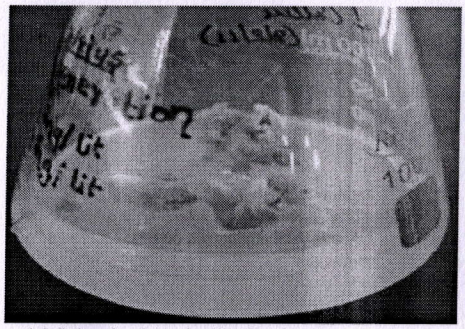
Rooted plantlets were removed from culture vials after agar had been removed by washing with sterile water, the plantlets were planted in a pots containing 1:1 sterilized potting mixture soil and washed sand (with pebble size of 0.5 -1.0 mm).the plants were placed outside in the shade (light max 83.46 m-2 s-1µm, temperature 25 +/- 4 °C) irrigated at 3 days interval with tap water.



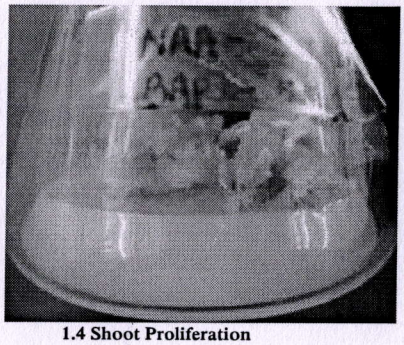
1.1 First Leaf Explant



1.2 Callus induction from first leaf



1.3 Sub culturing of calli of leaf explant.



1.4 Shoot Proliferation

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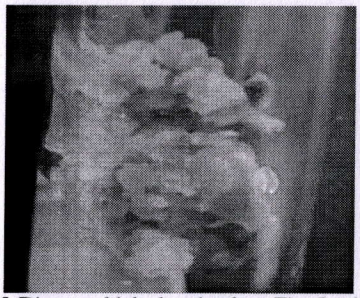
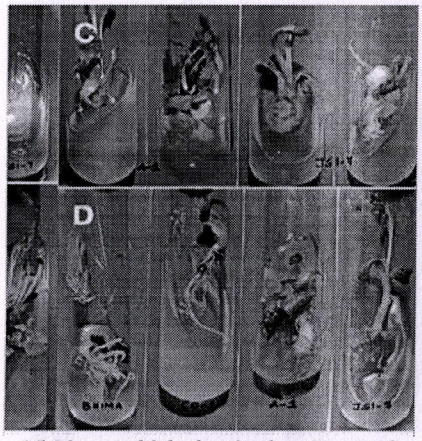


1.5 Direct multiple shooting from First Leaf



1.5 Direct multiple shooting from First Leaf .

1.6 Hardaning-Acclimatized Plant in the pot

RESULT AND DISCUSSION

Regeneration response was best on the MS medium supplemented with 3mg/lit NAA & 5mg/lit BAP gave callus induction in first leaf explants and direct shoot regeneration was observed in first leaf. Brownish green slow growing friable callus was obtained after 18 days of inoculation & shoot regeneration was obtained after 32 days of inoculation.

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ANTIFUNGAL ACTIVITIES OF LEAF EXTRACTS OF *SPHAGENTICOLA CALENDULACEA (L.)* PRUSKI OF ASTERACEAE FAMILY

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ABSTRACT:

Antifungal activities of leaf extracts of *Sphagneticola calendulacea* (L.) Pruski of Asteraceae family were investigated by using agar well diffusion method. Fungi viz. *Aspergillus Niger, Aspergillus flavus, Fusarium oxysporum* and *Rhizophus stolanifer* were cultured on PDA agar medium separately in petri plates of 11cm diameter. Wells of 10mm diameter were prepared in the agar medium with cork-borer Fresh leaf extracts of 10, 20, 30 and 40% were prepared, sterilized and used. Sterile distilled water was added in the central well and treated as control. Plates were incubated art 37°C. Inhibition zones were measured after 5 days. Well agar diffusion method: Leaf extract of 10%, 20%, 30% &40% concentration added in separate well. Central well was added with water was treated as a control. Extract inhibited the fungus growth around the wells. The inhibited zones around the wells were measured in millimetre. Readings were recorded in tabular form. Photographs were taken by using digital camera.

Keywords: *Leaf extracts, aqueous, methanol Sphagneticola calendulacea (L.) Pruski, Aspergillus.*

INTRODUCTION

Study Area: Ahmednagar is one of the largest districts of the Maharashtra states of India. It occupies an area of 17.035 sq.km. It is located between 180 2'and 190 9'North latitude and 700 9'and 750 5'East longitude. *Sphagneticola calendulacea* (L.) Pruski of Asteraceae family were collected from college campus of Ahmednagar city for the present work. *Sphagneticola calendulacea* (L.) Pruski (= Wedelia chinensis (Osbeck0 Merr.): Hook. f. Fl. Brit. India 3-306, 1881; Cooke, Fl. Pres. Bombay 2:98, 1958 (Repr); Almeida, Flora of Maharashtra Vol. 3(A), 146, 2001. Singh, Fl of Maharashtra state, Vol. 2, 250, 2001.Procumbent perennial herb; rooting at nodes; leaves simple, opposite, trinerved, subpetiolate, hispid; heads solitary, involucral bracts longer than disc florets, ligulate ray florets, yellow; cultivated in gardens.

Many workers have done work on antifungal properties of plant species of Asteraceae family.Some of theseare: Adjibode *et al* (2015) worked on *Synedrella nodiflora* (L.) Gaertn. ;Jalander and Gachande (2012) worked on effect of Pigeon pea [*Cajanus cajan* (L.) Millsp.] on the growth of *Fusarium oxysporum* sp udam; Jiang *et al* (2016) Identified and worked on allelochemicals in *Chrysanthemum indicum* L. and their fungicidal potential against *Sclerotium rolfsii*

Sacc. And *Atractylodes macrocephala* Koidz.; Kamble and Moon (2015) studied antifungal activity of crude extracts of *Tridax procumbens* L. against potentially pathogenic fungal species; Karunambigal and Gayathri Devi (2014) studied antibacterial activity of leaves and roots of *Eclipta alba;* Krishnaswamy and Christina (2015) worked on antibacterial activity of different parts of *Tridax procumbens* L. against human pathogens.; Malarkodi and Manoharan (2013) Antifungal activity of *Parthenium hysterophorus* L; Mares *et al* (2004) worked on antifungal activity of *Tagetes patula* extracts on some phytopathogenic fungi like *Pythium ultimum;* Shankar and Thomas (2014) studied antibacterial activity of flower heads of *Wedelia trilobata* (L.) ; Toppo *et al* (2013) Antimicrobial activity of *Sphagneticola trilobata* (L)Pruski, against some human pathogenic bacteria and fungi .

MATERIAL AND METHODS

Rhizopus stolanifer Vuillemin: Saprophytic as well as parasite, causes rot of fruits; aseptate mycelium; sporangiophores grouped; cosmopolitan. It is included in Mucoraceae family of order Mucorales, class Zygomycetes of Division Zygomycotina.

Aspergillus Niger Van Tieghem : Cosmopolitan; Saprophytic as well as pathogenic; known from fields before and after postharvest, stored grains, fruits; cause human diseases like aspergillosis; septate branched hyphae,; produce condiophores and conidia. It is included in Trichomaceae family of order Eurotiales, class Eurotiomycetes of Division Ascomicotina. *Aspergillus flavus* Link : Cosmopolitan; green, yellowish, reddish in color; Saprophytic as well as pathogenic; known from fields before and after post harvest, well developed on cereals, pulses, legumes, nuts, stored grains, fruits; septate branched hyphae,; produce condiophores and conidia. It produces aflatoxins which is toxic to mammals. It is included in Trichomaceae family of order Eurotiales, class Eurotiomycetes of Division Ascomicotina. *Fusarium oxysporium* Schlecht, Synder & Hanson. Soil borne saprophytic as well as pathogenic, it causes wilt disease of red gram; septate mycelium; form two types of conidia viz. microconidia and macroconidia. It is included in Nectiriaceae family of order Hypocreales, class Sordariomycetes of Division Ascomicotina.

Bioassay experiments were performed in the research laboratory of New Arts, Commerce & Science College; Botany Department; district Ahmednagar (Maharashtra State) at room temperature 250 c to28 0 c. Plant materials were collected from college campus. Stock solutions of 10%, 20%, 30% and 40% concentration of leaf samples of selected plant were prepared by using solvents like water and methanol. Extract solutions were obtained by washing and crushing leaves in mortar and pestle (Narval and Turo, 1994).

Preparation of PDA media: Potato dextrose Agar Potato -200 gm Dextrose -20 gm Agar -20 gm Water -1 liter . Peeled potatoes were cut into small pieces. 200 gm of potato pieces were weighed, washed quickly in running water and put in one litre of water and boiled for nearly one hour till a mass is formed. The mass was then squeezed through double layer of muslin cloth to obtained as much of the pulp as possible. Agar was dissolved separately in small volume of water 250 ml. Potato mass, Agar solution and Dextrose were mixed and final volume was made up to 1 litre in suitable glass container (conical flask) and sterilized in an autoclave at 120 c and 15 pounds pressure for

15 minutes. This PDA medium is poured in sterilized Petri plates under aseptic conditions of laminar air flow for culturing fungi. Cultures of *Aspergillus Niger, Aspergillus flavus* and *Fusarium oxysporium* and *Rhizhopus stolanifer*

Well agar diffusion method: Petri dishes of 11 cm diameter containing freshly prepared PDA medium were used for fungus culture. Many Petri plates with fully grown fungi were prepared. Then with the help of cork borer five wells per Petri plates were prepared. Leaf extract of 10%, 20%, 30% &40% concentration added in separate well. Central well was added with water was treated as a control. Extract inhibited the fungus growth around the wells. The inhibited zones around the wells were measured in millimetre. Readings were recorded in tabular form. Photographs were taken by using digital camera.

RESULTS AND DISCUSSION:

Effect of aqueous leaf extracts of *Sphagneticola calendulacea* (L.) Pruski of family Asteraceae family (Refer table 1 and graphs 1 to 5): Fresh leaf extracts viz 10% to 40% inhibited growth of *Aspergillus Niger* Van Tiegheum, *Aspergillus flavus* Link, *Fusarium oxysporum* Shlecht, Synder and Hanson and *Rhizhopus stolanifer* Vuillemin in a concentration correlated manner.

Inhibition was in an order of: *Fusarium oxysporum* > *Aspergillus flavus* > *Rhizhopus stolanifer* >*Aspergillus Niger*. *Aspergillus Niger* was least inhibited as compared to other three fungi while *Fusarium oxysporum* was maximally inhibited.

Effect of methanol leaf extracts of *Sphagneticola calendulacea* (L.) Pruski of Asteraceae family (Refer table 1 and graphs 1 to 5): All Methanol leaf extracts inhibited growth of *Aspergillus Niger* Van Tiegheum, *Aspergillus flavus* Link, *Fusarium oxysporum* Shlecht, Synder and Hanson and *Rhizhopus stolanifer* Vuillemin . Inhibition was concentration correlated.

Inhibition was in an order of: *Aspergillus flavus* > *Fusarium oxysporum* > *Rhizhopus stolanifer* >*Aspergillus Niger*. *Aspergillus Niger* least inhibited as compared to other three fungi while Aspergillus flavus was maximally inhibited.

SUMMARY AND CONCLUSION:

Aqueous leaf extracts of *Sphagneticola calendulacea* (L.) Pruski of family Asteraceae inhibited growth of *Aspergillus Niger* Van Tiegheum, *Aspergillus flavus* Link, *Fusarium oxysporum* Shlecht, Synder and Hanson and *Rhizhopus stolanifer* Vuillemin in a concentration correlated manner. *Aspergillus Niger* was least inhibited as compared to other three fungi while *Fusarium oxysporum* was maximally inhibited.

Methanol leaf extracts of *Sphagneticola calendulacea* (L.) Pruski of Asteraceae family inhibited growth of *Aspergillus Niger* Van Tiegheum, *Aspergillus flavus* Link, *Fusarium oxysporum* Shlecht, Synder and Hanson and *Rhizhopus stolanifer* Vuillemin . Inhibition was concentration correlated. *Aspergillus Niger* least inhibited as compared to other three fungi while Aspergillus flavus was maximally inhibited. Shankar and Thomas (2014) demonstrated similar antibacterial results of flower heads of *Wedelia trilobata* (L.)

ACKNOWLEDGEMENT:

I express my sincere sense of gratitude to head of the botany department Dr R.G. Khose for their keen interest in the subject, scholarly inspiration, efficient guidance, constant encouragement and pertinent criticism during

the course of present investigations, which always kept my research work in progress.

I should not miss the opportunity to express my heart – felt gratitude and regards to the Hon. magangement of Mula Education Society Sonai, Tal- Newasa, Dist- Ahmednagar and pragtik shikshan sanstha Rajapur, Tal. Sangmner, Dist. Ahemednagar (MS) and Principal Dr. Laware Sir. Principal Dr. Zaware Sir,

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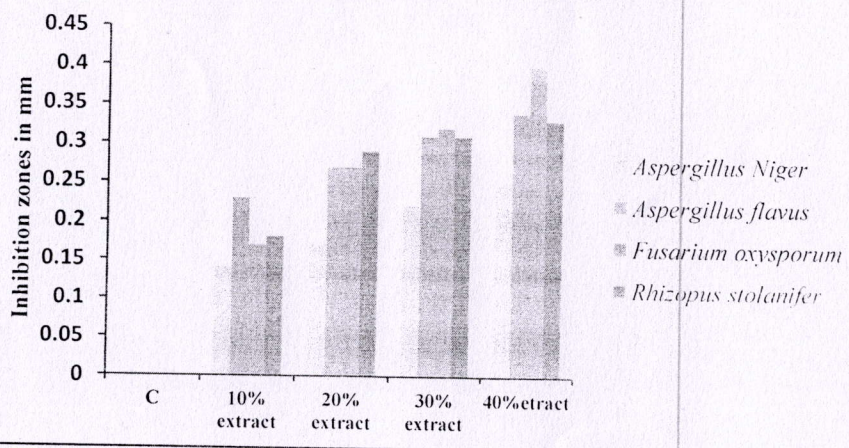
Puccinia arachidis Speg. J. Microb. World 17 (1): 27-31.

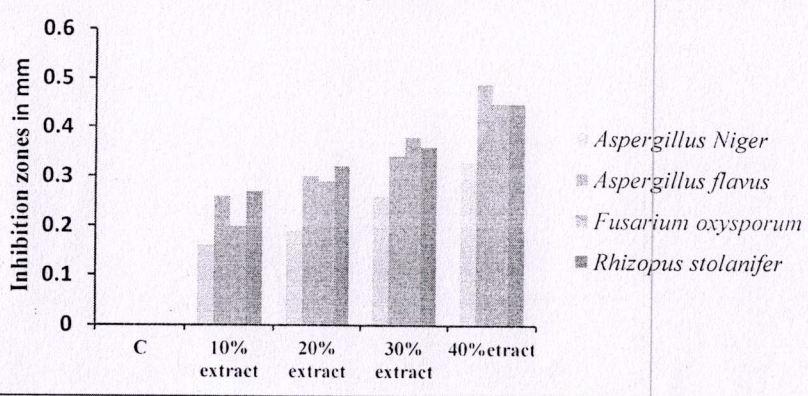
Table No1: Effect of leaf extracts of *Sphagneticola calendulacea* (L.) Pruski (= *Wedelia chinensis* (Osbeck) Merr):

Plant	Leaf Extract	Name of the fungus	Inhibition zone in mm					CD at 0.05%	P value at 0.05%
			control	10%	20%	30%	40%		
Sphagneticola calendulacea (L.) Pruski	Aqueous	*Aspergillus niger*	0.00a±0.00	0.14b ± 0.018	0.17b ±0.024	0.22c ±0.020	0.25d ±0.03	0.038	7.55E-10
	Aqueous	*Aspergillus flavus*	0.00a±0.00	0.23b ±0.026	0.27bc ±0.021	0.31bd ±0.023	0.34e ±0.048	0.05	6.54E-12
	Aqueous	*Fusarium oxysporum*	0.00a±0.00	0.17b ±0.026	0.27c ±0.021	0.32 ±0.025	0.40c ±0.37	0.044	5.53E-12
	Aqueous	*Rhizhopus stolanifer*	0.00a±0.00	0.18b ±0.25	0.29c ±0.23	0.31d ±0.23	0.33d ±0.037	0.046	7.37E-12
Sphagneticola calendulacea (L.) Pruski	Methanol	*Aspergillus Niger*	0.00a±0.00	0.16b ±0.014	0.19c ±0.024	0.26d ±0.03	0.33e ±0.023	0.026	4.29E-11
	Methanol	*Aspergillus flavus*	0.00a±0.00	0.26b ±0.03	0.30 ±0.024	0.34 ±0.022	0.49 ±0.031	0.031	2.99E-16
	Methanol	*Fusarium oxysporum*	0.00a±0.00	0.020b ±0.025	0.29c ±0.024	0.38d ±0.033	0.45e ±0.037	0.035	1.13E-14
	Methanol	*Rhizhopus stolanifer*	0.00a±0.00	0.27b ±0.031	0.32c ±0.026	0.36 ±0.026	0.45e ±0.034	0.034	2.30E-14

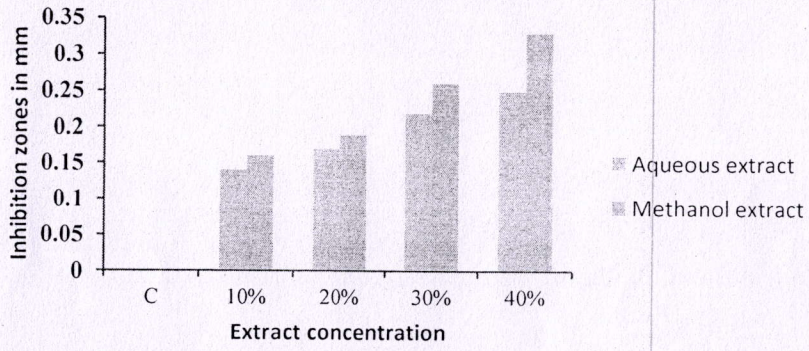
Graph 1: Effect of aqueous leaf extracts of *Sphagneticola calanendulaca* (L.)Pruski of fungal growth.



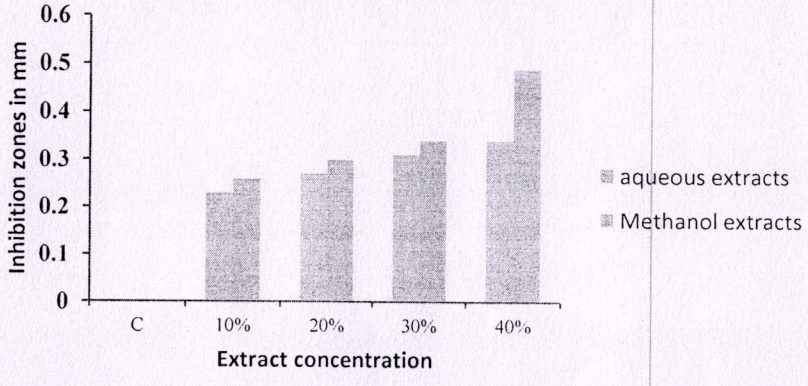
Graph 2: Effect of methanol leaf extracts of *Sphagneticola calendulacea* (L.)Pruski on fungal growth



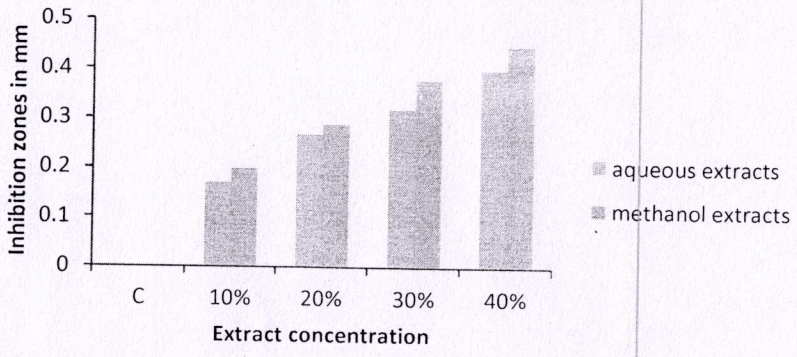
Graph 3:Effect of leaf extracts of *Sphagneticola calendulacea* on *Aspergillus Niger*



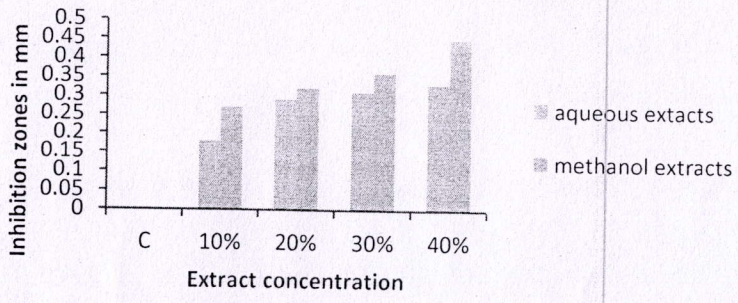
Graph 4:Effect of leaf extractsof *Spagneticola calendulacea* on growth of *Aspergillus flavus*



Graph 5:Effect of leaf extracts *of Spgagneticola calendulacea* on growth of *Fusarium oxysporum*



Graph 6: Effect of leaf extracts of *Sphagneticola calendulacea* on growth of *Rhizopus stolanfer*



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EFFECT OF AQUEOUS FOLIAR SPRAY OF LEAF EXTRACTS OF SOME PLANT SPECIES OF ASTERACEAE ON RUST DISEASE INCIDENCE % OF GROUNDNUT.

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ABSTRACT:

Rust (*Puccinia arachidis* Speg) of ground nut has become one of the serious diseases in India since 1971. It gets spread rapidly through seed/pods contamination; wind borne uredospores. In severe infection condition the crop is completely destroyed. It can be controlled by using rust resistant groundnut varieties and by using chemicals. Farmers have been using synthetic chemicals indiscriminately causing environmental pollution and poisoning nature and food. It is not desirable. This pathogen survives in the plant debris in soil and easily.Rust appears in the field under warm and humid conditions. We tried to investigate fungicidaleffect of fresh leaf extracts of ten species of Asteraceae family against phytopathogenic fungi that cause crop plant diseases. According to the Rust disease incidence %, control of the disease could be put in an order of: ***Pluchea tomentosa > Erigeron bonariensis> Synedrella nodiflora> Parthenium hysterophorus> Launaea procumbens >Tagetes erecta >Tridax procumbens > Sphagneticola calandulacea> Cynathillium cinereum >mixed >Eclipta prostrata***

Keywords: *Plant spp. Of Asteraceae family, rust disease of Groundnut, antifungal.*

INTRODUCTION:

Allelopathy is defined as "Chemically elicited interactions among plants mediated by varieties of chemical compounds with different of modes of biochemical actions." Molisch (1937) introduced the word "Allelopathy" for beneficial as well as harmful (detrimental) reciprocal biochemical interactions among plants including microorganisms. Allelochemicals are the natural secondary metabolites produced by the plants.

With the increase in human population demand for basic needs went on increasing. To meet the demands agricultural techniques, synthetic toxic biocides and synthetic fertilizers have been used to increase the agricultural yields. Indiscriminate use of these and water resulted in soil and water pollution. Our fertile lands have become non-fertile. Increasing global awareness towards environmental pollution problems has led research workers to find out safe alternatives.

Plants produce varieties of allelochemicals as natural secondary metabolites. These can be used as biocides that are eco-friendly i.e. biodegradable, renewable and abundantly available. There is a vast scope for research in investigating allelochemicals and use them in sustainable agriculture for food production without polluting environment Plants contain varieties of chemicals that are produced as secondary metabolites. They are natural and

easily biodegraded. Since botanical source of biocides is eco-friendly i.e. biodegradable, renewable and abundantly available, there is a vast scope for research in Allelopathy and investigating allelochemicals and use them in agriculture without polluting environment. The present paper deals with the aspects of fungicidal potentials of weeds of Asteraceae family.

REVIEW OF LITERATURE:

Govindasamy and Balasubramanian (1989) worked on biological control of groundnut disease by using*Trichoderma harzianum*that reduced germination % of uredospores.Govindaswamy (1989) c.f. Rice (1994) worked on controlling 'rust' in *Arachis hypogea* caused by *Puccinia arachidis*. Pre-treatment peanuts with conidia of *Trichoderma harzianum* inhibited germination and germ tube growth of the rust uredospores.

Kishore and Pande (2005) recorded those extracts of *Tagetes patula, Cymopsis teragolobus* significantly inhibited the germination of spores of *Puccinia personata* and *P. arachidis*.

Riaz *et al* (2007) conducted experiments to assess effects of leaf residues of plants viz. *Parthenium hysterophorus* L., *Ageratum conyzoides* L. on mycorrhizal colonization and corm rot disease of *Gladiolus* caused by *Fusarium oxysporum f.sp.gladioli* (Massey) Snyd. and Hans.

Martyniuk and Bialy (2008) worked on antifungal activity of eight saponins obtained from *Medicago arabica*. Saponins 'hederagenin' with two sugars (glucose and arabinose) had higher antifungal effect than 'hederagenin' with one sugar arabinose. Saponins were inhibitory to *Aspergillus Niger, Fusarium oxysporum, Pythium aphanidermatum* and *Sclerotium rolfsii*.

Faizi *et al* (2008) worked antifungal as well as antibacterial activities of *Tagetes patula*. They isolated flavonoid patuletin which in minimum inhibitory concentration (MIC) inhibited growth of *Staphylococcus* spp., *Streptococcus* spp., *Micrococcus* spp. bacteria. Petroleum ether extract of roots inhibited the fungus *Candida albicans*.

Arslan *et al* (2009) evaluated antifungal activity of extracts of spices against bean rust caused by *Uromyces appendiculatus*. Extracts of Basil, black cumin, black paper, fennel, laurel, parsley, celery and rosemary were tested against the fungal pathogen. Fungicidal activity against bean rust was in an order of: Black cumin (*Nigella sativa* L.) > laurel > Basil > Celery > black paper > rosemary > fennel > parsley. Rust control efficacy in percentage of Black cumin (85%) was higher while that of Parsley (5.9%) was least.

Arora and Kaushik (2003) recorded that the extracts of *Conyzabon ariensis* (L.) Crong and *Erigeron karvinskianus* DC. (Family Asteraceae) were highly fungicidal against soybean fungal pathogens viz., *Colletotrichum truncatum* (Schwein) Andrus & Moore, *Fusarium oxysporum* Schl. ex Fr. and *Macrophomina phaseolina* (Tassi) Goid.

Chuihua *et al.* (2004) found out that *Ageratum conyzoides* L., (Asteraceae family) contains allelopathins like 3-caryophyllene, p-bisabolene and p-farnescene that could exert synergistic inhibitory effect on test plants. It is herbicidal as well as fungicidal.

Patil and Kamble (2015) recorded that leaf extracts of *Eupatorium odoratum, Blumea balsminifera, Cassia tora* L, *Vitex negundo, Xanthium indicum* and *Hyptis suaveolens* inhibited spore germination of *Puccinia arachidis* Speg.

MATERIAL AND METHOD:

Study area: Ahmednagar district is the largest district of Maharashtra state. It is located between18º2'and 75º5'North latitude and 70º9'and 75º5'East longitude. The Sahyadri has formed a naturally boundaries in between Ahmednagar, Thane and Nasik District. Balaghat is the prominent ranges of Sahydri that traverse the district. Plant species were identified by using Flora of Maharashtra, Almeida (2001).

Groundnut 'HB11' variety of Mahadhan Pvt. Ltd. company, Indore (India) was sown in the field in Shendi village near Ahmednagar city in the month of April 2018. Spraying of extracts was started 30 DAS (days after sowing). 40% leaf extracts of ten selected plant species of Asteraceae were prepared. 40% mixture of all leaf extracts was also prepared. Spraying was done in the morning regularly from 30 to 70 DAS.Control plants were sprayed with pure water. Readings were taken, tabulated and disease incidence %, rust incidence % were calculated **(Table 1 and Graph 1)**.

RESULTS AND DISCUSSION:

***Cynathillium cinereum* (L.) H.Rob.** reduced rust disease incidence % from11.82 to 1.98 i.e. by 9.84%.

***Sphagneticola calandulacea* (L.)** Pruskireduced the rust disease incidence % from14.98 to 5.53 i.e. by 9.45%.

***Erigeron bonariensis* Linn.**reduced the rust disease incidence from % 9.64to 3.06 i.e. by 6.58%.

Launaea procumbens (Roxb.) Ramayya & Rajgopalreduced the rust disease incidence % from 12.32 to 4.43 i.e. by 7.89%.

Tridax procumbens (L.) L reduced the rust disease incidence % from11.39to 2.82 i.e. by 8.57%.

Pluchea tomentosaDC reduced the rust disease incidence % from13.11 to 8.90 i.e. by 4.21%.

***Tagetes erecta* L**reduced the rust disease incidence % from 11.00to 2.82 i.e. by 8.18%.

Parthenium hysterophorusL reduced the rust disease incidence % from 12.54 to 4.76 i.e. by 7.78%.

Synedrella nodiflora(Linn.) Gaertn. reduced the rust disease incidence % from 13.50 to 1.98 i.e. by 6.97%.

Eclipta prostrata.(Linn.) L reduced the rust disease incidence % from 16.67 to 1.49 i.e. by 15.18%.

Effect of mixed extracts of ten plants rust disease incidence % : When sprayed on the ground nut crop 30Days to 70Daysperiod three times per week mixed leafextracts reduced the rust disease incidence % 13.15to 0.23 i.e. by 12.9%.

'Rust disease incidence %' of the disease by plant species was in an order of: ***Eclipta prostrata* > *mixed* >*Cynathillium cinereum* > *Sphagneticola calandulacea* > *Tridax procumbens*>*Tagetes erecta* > *Launaea procumbens* > *Parthenium hysterophorus* > *Synedrella nodiflora*> *Erigeron bonariensis* >*Pluchea tomentosa*** (Table 1, Graph 1). More reduction in disease incidence by *Eclipta prostrata* and less by *Pluchea tomentosa.*

For controlling rust,tikka and other fungal diseases of groundnut (*Arachis hypogea* L.),one of valuable commodity of the crops grown for seeds, oil and fodder crop, synthetic fungicides like Aprop,Bumper, Orius, Plethora, Benamain and Mainex are being used by the farmers. To save poisoning and deteriorating soil, underground water by using hazardous non-biodegradable synthetic fungicides, it is desirable to control fungal diseases using natural, easily biodegradable plant originated fungicides. Compositae (Asteraceae) is a cosmopolitan family.It is one of the dominant families of flowering plants. Majority grow in wild nature. They are easily available. Many workers have been doing research on the species to find out their efficacy of biocidal (fungicide /insecticide / nematicide etc.) nature.

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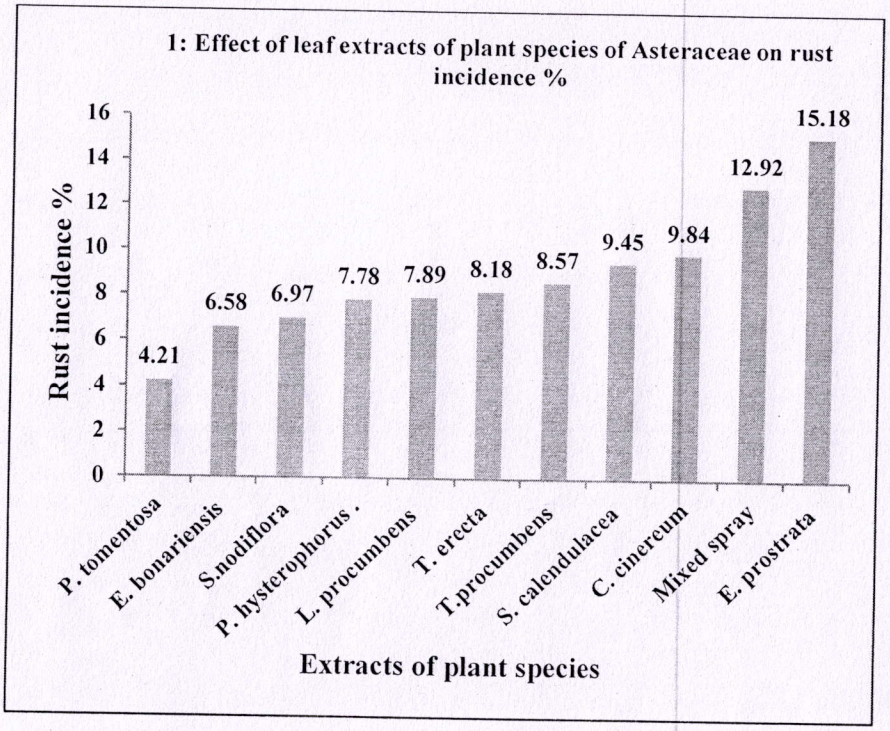

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FLORISTIC DIVERSITY OF SHRIRAMPUR TAHASIL, DISTRICT AHMEDNAGAR (MAHARASHTRA).

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ABSTRACT:
The Shrirampur area is located in the Ahmednagar district of Maharashtra. The area is rich in vegetation shows more biodiversity of plant species. The present paper provides information regarding 51 plants belonging to 39 families survey from Shrirampurtahasil of Ahmednagar district (MS). Brief information about the botanical names, family and local names have been presented.

Keywords: biodiversity, botanical names, local names local names

INTRODUCTION

Floristic diversity can be defined as the variety and variability of plants in a given region. It refers to the number of types or taxa in a given region or group. Floristic diversity can be measured at any level from overall global diversity to ecosystem, community, species, populations, individuals and even to genes within a single individual. The present paper provides information regarding about the botanical names, family and local names survey from Shrirampur tahasil of Ahmednagar district (MS).

MATERIALS AND METHODS:

1) The present study was carried out in Shrirampur tahasil of Ahmednagar District (MS) during 2019-2020.

2) The information regarding local name of plants were collected through accessing the local people through interviews, discussions and observations.

3) Several specimens of plants were collected. Most of the plants were collected fresh, photographs of collected plant species were also made, so as to enhance their identification.

4) The plant species obtained from the survey were identified using keys and description given in The Flora of Presidency of Bombay (Cooke,1958), Flora of Marathwada (Vol. I and Vol. II) by V.N. Naik (1998) etc.

RESULTS AND DISCUSSION:

The present paper provides information regarding 51 plants belonging to 39 familiy survey from Shrirampur tahasil of Ahmednagar district (MS). Brief information about the botanical names, family, and local names has been presented.

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Sr. No	Botnical Name	Family	Local Name
1	*Amaranthus viridis*	Amranthaceae	Green amaranth
2	*Aegle marmelos*, Corr.	Rutaceae	Bel
3	*Albizia lebbeck*, Benth.	Leguminosae	Shirish
4	*Achyranthus aspera*	Amranthaceae	Aghada
5	*Aloe vera*	Liliaceae	Korpad
6	*Annona squamosa*, L.	Annonaceae	Sitafal
7	*Argemone mexicana*	Papaveraceae	Piwaladhotra
8	*Azadiracta indica*, A.Juss	Meliaceae	Kadunimb
9	*Barleria prionitis*	Acanthaceae	Kate- koranti
10	*Bambusa arundinacea*, Willd.	Gramineae	Bamboo
11	*Bauhinia Purpurea*L.	Caesalpiniaceae	Apata
12	*Bidensbi ternata*	Asteraceae	Chikata
13	*Butea monosperma*, Taub,	Leguminosae	Palas
14	*Boerhavia diffusa*	Nyctaginaceae	Punarna
15	*Caesalpinia cristata*, L.	Leguminosae	Sagrkota
16	*Caesalpinia pulcherrima*, L.	Caesalpiniaceae	Shankasur
17	*Calotropis procera*, R. BR.	Asclepiadaceae	Rui
18	*Cassia fistula*, L.	Caesalpiniaceae	Bahava
19	*Citrus aurantifolia*, Swingle	Rutaceae	Limbu
20	*Chrysanthemum indicum*	Asteraceae	Shevanti
21	*Cocos nucifera*, L.	Palmae	Naral
22	*Commelina benghalensis*	Commlelinaceae	Kena
23	*Cynodon dactylon*	Poaceae	Harali
24	*Dalbergia Sissoo*, Roxb.	Leguminosae	Shisam
25	*Datura metal*	Solanaceae	Kala Dhotra

26	*Datura stramonium*	Solanaceae	Dhotra
27	*Emblica officinalis*, Gaertm.	Euphorbiaceae	Avala
28	*Eucalyptus globulus*, Labill.	Myrtaceae	Nilgiri
29	*Eujenia jambolana*, Lam.	Myrtaceae	Jambhul
30	*Euphorbia hirta*	Euphorbiaceae	Dudhi
31	*Ficus glamerata*, Roxb.	Moraceae	Umbar
32	*Ficus religiosa*, L.	Moraceae	Pimpal
33	*Hibiscus cannabinus*	Malvaceae	Ambadi
34	*Mangifera indica*	Anacardiaceae	Amba
35	*Mimosa pudica*	Mimosaceae	Lajalu
36	*Mirabilis jalapa*	Nyctaginaceae	Gulbakshi
37	*Moringa oleifera*, Lamk.	Moringaceae	Shevaga
38	*Parthenium hysterophorus*	Asteraceae	Gajar- gavat
39	*Polyalthia longifolia*, B & H	Annonaceae	Ashok
40	*Pongamia pinnata*, Lour.	Leguminosae	Karanj
41	*Punica granatum*, L.	Punicaceae	Dalimb
42	*Ricinus communis*, L.	Euphorbiaceae	Erand
43	*Santalum album*, L.	Santalaceae	Chandan
44	*Sapindus trifolius*, L.	Sapindaceae	Ritha
45	*Sesbania grandiflora*, Poir.	Papilionaceae	Hadaga
46	*Sonanum nigrum*	Solanaceae	AmoniKamoni
47	*Tamarindus indica*, L.	Caesalpiniaceae	Chinch
48	*Terminalia belerica*, Roxb.	Combrataceae	Behada
49	*Terminalia chebula*, Retz.	Combrataceae	Hirda
50	*Zizyphus jujuba*, Lamk.	Rhamnaceae	Bor
51	*Tridax procumbens*	Asteraceae	Dagadipala

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FUNGICIDAL ACTIVITY OF AN ALLELOPATHIC PLANT *TRIDAX PROCUMBENS*

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ABSTRACT

Tridex procumbens L. is one of the medicinal plants used in India to cure various diseases. It is also sh antimicrobial effect. All over the world botanical explorations for Allelopathic studies is the major task tal by the researcher. Developing natural, eco-friendly and biodegradable, biocides is need of the time amc them, Indian sub-continent is one of the mega biodiversity centers, which can be explored for the various kii of the aspects. The present research was under taken to study the antimicrobial activity of *Tridex procumbens* controlled condition against *Aspergillus niger*. The result obtained indicates the antifungal activity of the pl against *A. niger*.

INTRODUCTION

Tridax procumbance plant belongs to the family Asteraceae, family is best known as a widespread weed a pest plant. It is commonly known as Ekdandi, Dagadipala etc. It is asemi prostrate perennial herb,w bladder,taproot, wavy with many lateral branches more or less ascending stems(Guha P. et al). The native ran include Tropical America, Venezuela and Columbia to Peru and Bolivia. It is known for it's wound heali antilytics whole plant is made in to paste and applied on fresh cuts, EwaStompor-chrzan 2003.

Allelopathic studies the interrelations among Plants Fungi, Algae and Bacteria with organisms living certain eco-system,interaction that, are mediated by the secondary metabolites, produced and executed in t environment.Consequently allelopathy is the multidisciplinary science where ecologist, chemists, physiolog and molecular biologist offer their skills to give an overall view of the complex interactions, occurring ir certain ecosystem as a result of these studies applications in weed, paste management are expected in su different fields as development of new agro-chemicals cultural methods developing of allelopathic crops w increasing weed resistance etc.

The present paper will focus on the chemical aspects of allelopathicy pointing out the most rece advances in the chemical disclosed. Their mode of action and their fate in the eco-system also, attention will paid to achievements in Genomics, and Proteomics. Two emerging fields rather than being exclusive this pap is intended to refit a critical vision of current state of allelopathy and to point out future lines of research.

MATERIAL AND METHODS

The selected plant material *T.procumbance*is a common weed found in various crops as well as in barren lan Fresh sample of selected plants collected from west plant around the city and college campus were crushed in mortar and pestal and allow to soak at room temperature in distilled water in the ratio of 1:10 w/v (pla material:distilled water) It was treated as a stock solution. It was diluted to 10% ,0.1%, 0.01%, 0.001% Laboratory experiment was performed during 2013-2014 at room temp (25°to28°c). Extract substances we obtained by crushing the cells/tissues of the plant parts.10% stock extract of fresh sample were prepared.

PREPARATIONOF PDA MEDIUM

200 g peeled pieces of potato,boiled in distilled water and filtered through muslin cloth in 1000 ml conic flask.15 g dextrose was added in it and 15 g agar was added slowly while stirring. Final volume 1000ml wa This PDA medium was then autoclaved and used for culturing fungi in sterile petridishes. Under steril conditions,Wheat variety '489'grains were put in leaf extract solution of 10%, 0.1%, 0.01%, 0.001% an

distilled water as control,for ten to fifteen minuetsand transfer to sterile petridieshes of 11cm d... containing freshly prepared PDA medium. Twenty seeds per petriplate were transferred.Occurrence of fu... wheat grains was recorded on 3rd, 5thand 7thday from date of inoculation.Photographs were taken by ... digital camera. Number of fungal colonies was recorded% Inhibition of stimulation of fungi over contr... calculated by a formula % Inhibition of stimulation =(T/c-1)100(Where T: treatment,C:control).

RESULT AND DISCUSSION

The antifungal activity of *Tridax procumbance* was determined against *Aspergillus spp*. Both the orga... responded to water extract using well diffusion method. The result of antifungal activity of *Tridax procu...* by agar well diffusion method with water extract was showed as follow.The extract shows significant z... inhibition against selected fungal species on wheat grains.

Our research also resemble the earlier research of the, Joy M et al *2004,* aerial parts *Cashew i*ts, antif... properties could to be exploited as a natural fungicidal. The allelopathin isolated from *Agyratum* coni... L(family- Asteraceae) shows fungicidal activity (Kaushik R.Det.al .,2004).

Fig.1. shows the effect of the different concentrations of the *Tridex* extract on the growth of the *Aspergillus*, it is also summarized in the table 1.

Antifungal have enormous therapeutic potential as they can serves the purpose with lesser side ... due to an array of secondary metabolites.This investigation in *T procumbens* has opened up the possibil... the use of this plant in drug development for human consumption for the treatment of wound infectio... various diseases.

OBSERVATION TABLE

Date	Extract Conclusion	No. of Wheat Grains Infected	% of Occurrence of Fungi	% Inhabitation of Fungi Over Control
29/3/14	Sterile D.W.(Control)	20	100	-
	0.001%	9	45	-55
	0.01%	6	30	-70
	0.1%	5	25	-75
	10%	2	10	-90
31/3/14	Sterile D.W.(Control)	20	100	
	0.001%	12	60	-40
	0.01%	10	50	-50
	0.1%	8	40	-60
	10%	6	30	-70
21/4/14	Sterile D.W.(Control)	20	100	
	0.001%	15	75	-25
	0.01%	13	65	-35

FIGURE
1. Ev... Al...
2. Gu... ex... Al...
3. Jo... (A...
4. Ka... fro...

0.1%	9	45	-55
10%	7	35	-65

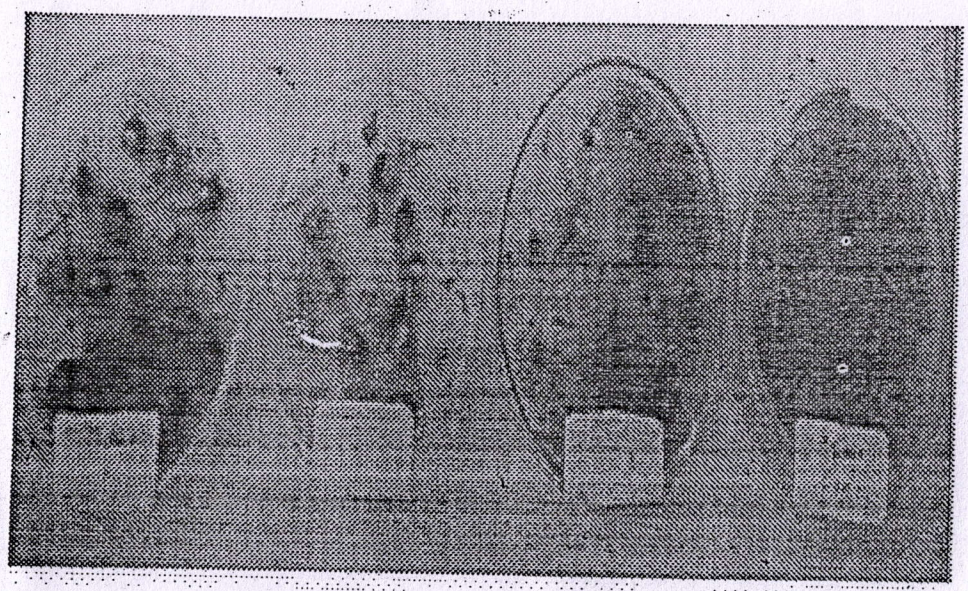

Fig:1: Efficacy of Different concentrations of T. procumbences extract

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