Certificate

This Certificate is in recognition of the praiseworthy work done by Late. N.P.Waghaye Arts, Commerce and Science College Andhalgaon. We gave them 25 plants to Department of Botany of Late N.P.Waghaye Arts Commerce And Science College Andhalgaon in grant bases.

The cost of this plant is approximately ..7800.Rs:.....

कृषि पर्यवेक्षक
तालुका फळरोप वाटीका आंधळगांव
ता.मोहाडी, जि.भंडारा
17/02/2020

Late N.P.W. Art, Commerce and Science College Aadhalgaon

Department of Botany

Faculty of Science

Research Project Report on Medicinal plants extract used in Agriculture Field to control Diseases.

Introduction:- Gondia kawalewada is the largest village and has abundant medicinal plant species. But in agriculture field use of synthetic products or Artificial medicine that are toxic for the management of production field. Which has been triggering a set of problems to the environment dormers and Consumers.

Site of work :- Collection of different medicine plant from rural area.

Medicinal plant

1)Azadiracta indica:- margosa plant:- it is traditional medicine plant in India. Tree have been attributed is medicinal benefit of component in the resin is an effective insecticide and another component is an effective antifungal.i Another component of plant is a Azadiractin. Azadiractin is a triterpenoids. Limbin is also triterpenoid.

2) Mamardica charantia:- karela plant:- it is Herbaceous. It bears simple alternate leaves. Each plant bear separate yellow male and female flower.The fruit is most often eaten green. It contain major chemical constituents of Heropolysaccharide, flavonoid, phenolic compounds,linolenic acid,eleostearic acid, monoterpenes,phenylproponoides.

Bitter melon extract were also found to alternate bacterial induced inflammation.

3) Ricinus communis:- castor plant:- The castor bean or Castor Oil Plant is a species of perennial flowering plant. In caster bean is an evergreen herbaceous or semi woody large shrub or small tree. It can grow to 40 feet tall. The glossy leaves, long stalked, alternate and palmate with 2 to 12 deep lobes.

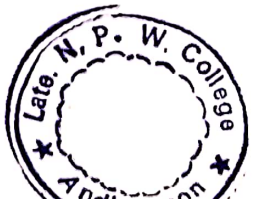
Terpenoids and Tocophenol compound have been found in aerial part of Ricinus communis.

4)Annona reticulata :- custard apple plant:- sitafal:- Annona reticulata have simple leaves with smooth margin that are alternately arrange in 2 rows along the stems. Leaves of annona reticulata have a number of chemical compound belong to diverse group, including phenolics, annonaceous acetogenins, saponins, flavonoid,alkoloides, glycosides, steroids and tarpenoides.

Extract of annona reticulata leaves have been studied for their biological activities including **antimicrobial functions.**

5) Aegle marmelos or Bael or Bel patra plant:- Aegle marmelos is deciduous shrubs or small medium tree. Bark is pale yellow or grayish, smooth or finely fissured and floking, armed with long straight Spines. Leaf is trifoliate, alternate, each leaflet flower- Pale green or yellowish, bisexual, short drooping unbranch cluster.

Annona marmelos leaf extract contain alkoloides, flavonoid,phenolics.



The leaf extract contain antibacterial, antiprotozoal and antifungal properties.

6) Coloropis procera:- Dhatura:- Colotropis procera is a Shrub are small tree, high stem usually simple, rarely branched, woody at base and covered with a fissured ,Corky bark, branches, sacculent and densely white, tomentose,early globerscent.

Leaf extract of coloropis procera revealed the presence of glycosides, protein, triterpenoids, steroid , flavonoides.

plant is chemical constituents and their biological plant for building materials, natural pesticides, animal feed, and bioremediative purposes.

7) Ipomea fistulasa/ Besharam:- Ipomea fistulasa is a Shrub growing, erect are ascending habit,pink morning glossy. This flowering plant has heart-shaped leaves and flower is funnel like shaped.

It contain a component identical to marsilin, a sedative and anticonvulsants. Glycosidic saponins.

Leaf component-is alkaloids, saponins, cardiae glycosides, tannins, terpenoid, steroid, flavonoides.

8) Acacia nilotica / babool:-Acacia nilotica is a tree, Crown, steam and branches usually dark to black coloured, fissured black, grey- pinkish, slash, excluding a reddish low quantity of gum. The leaves are bipinnate with 3 to 6 pairs of pinnulae and 10 to 36 pairs of leaflets.

phytochemical analysis- of the Acacia nilotica leaf extract revealed that if contain oil saponins, hydrolysable, tannins, flavonoid, tritetpenoid, phenol, alkaloid etc

9) Pongamia pinnata:- Karanja:- Pongamia pinnata is a medium sized evergreen or deciduous, Glorious shrub or tree, Brad crown of spreading or dropping branches. Bark grey- brown , smooth or faintly vertically fissured.

Chemical component :- Alkoloids, steroids, Corbohydrates, Tannins, flavonoid s, Terpenoids Coumarins, Phenol and Quinone..

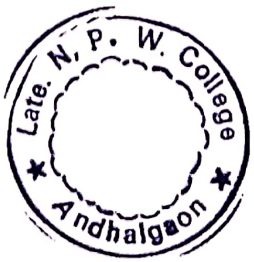
Steps involved in the Extraction of medicinal plants.

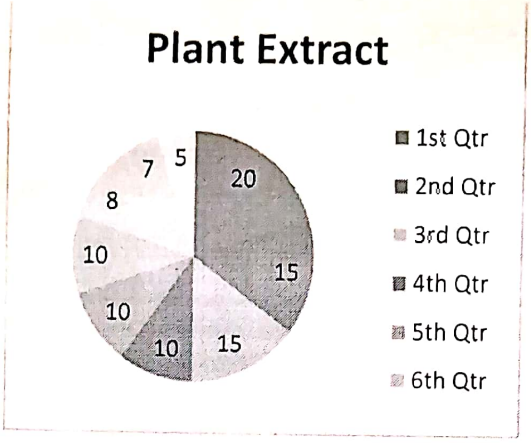
1) Size reduction:- plant materials is macerated with water and then poured into container. It is allowed 01 months.

2) Filtration:- The extract to obtained is separated out from the Marc.

3) Spray drying :- The filtered extract is subject ed to spray drying with a high pressure pump.

Map Of the study:





Statistics of leaf part of plants used in extract preparation

Indentify the different diseases of Paddy-Oryza sativa

It is crucible to understand the causes, symptoms and treatment option for paddy diseases to prevent their spread and minimise their impact. In this listicle. We will explore common paddy disease and what you need to know about them.

1) Rice blast or Blast of rice-casual agent- pyricularia oryzae.

The disease affect all parts of rice plant mainly leaves, neck and inflorescence.

2) Bacterial leaf blight of rice- Causal agent- Xanthomonas oryzae.

Symptoms :- Water shocked spot appear on leaves which gradually coalesce to form blotches and white streaks from the tip of the leaf to the base. Wilting and yellowish of leaves.

3) Sheath Rot of rice:- Casual agent :- Sarocladium.

symptoms:- Irregular Greyish Brown, oryzae. Water soaked lesions on flag leaf sheath.white powdery fungal growth inside the affected sheath .white powdery fungal growth inside the effected sheath.

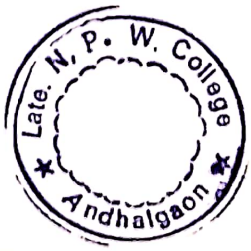
4) Rice brown spot:- Causal agent:- Helminthosorium oryzae.

symptoms:-Oval or cylindrical dark brown spot with a yellow holes. Infection of forests can lead to incomplete grain filling and reduce grain quality.

5) False smut of rice:- Casual agent:- Ustiginoidea virens.

Symptoms:- spikelets have orange and greenish black velvet smut balls.

This leads of chaffy grains.



6) Sheth Blight Of Rice:- casual agent:-Rhizoctonia salani.

symptoms:- Initially greenish-grey oval or elliptical lesions appear on the leaf. Sheath near the water level.

7) Tungro Diseases of Rice:- Causal agent:- Rice tungro virus (rtsv and rtbv).

symptoms:- stunted plants, yellow to orange discoloration of leaves.

8) Foot Rot/ Bakanae / foolish seedlig disease:- causal agent:- Gibberella fujikuroi.

symptoms:- In affect both seedling in the nursery and plants in the main field. Infected plants produce tall and thin tillers with yellow ish- green and pale leaves.

9) Stem rot of rice:- Casual agent:- Sclerotium oryzae.

symptoms:- Initially small black lessions appear on the outer leaf sheath. Later the infected culm lodges and produces chalky grains.

10) Grassy stunt disease of rice:-casual agent:- Rice grassy stunt Tenui virus vector, Brown plant hoppers.

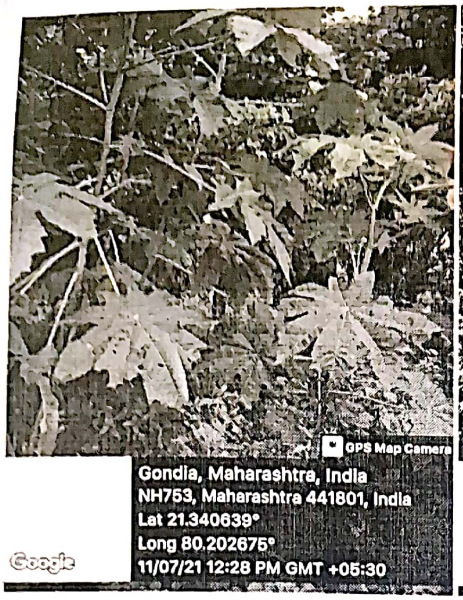
symptoms:- stunted growth, excessive tillering grassy and rosette appearance of disease hills.

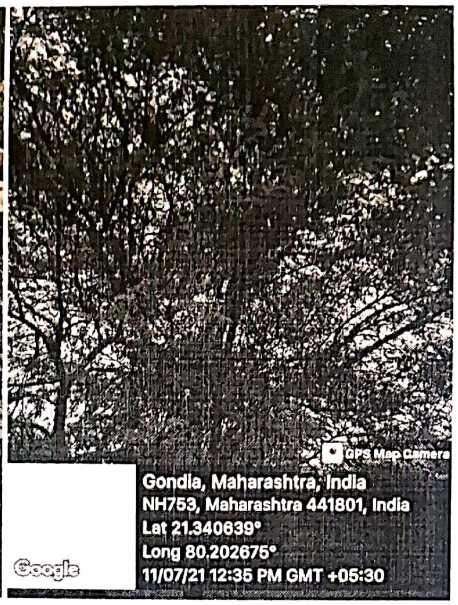
11) Rice ragged stunt virus:- Causal agent rice Ragged stunt virus. vector-Brown plant hoppers.

symptoms:- Leaves with uneven edges, leaf blade twisted into spiral shape at the base giving a ragged appearance. Stunted growth incomplete panicle emergence.

Benefits:- The use of plant extracts in agriculture field. Control of phytopathogenic, micro- organisms, insects control, Biostimulant effect, resistance induction and herbicide.

Conclusion:- The use of medicinal plants extract in agriculture field plant become healthy and production is more. Not hazard to Environmental , farmers , consumers. More fertility in soil.





Late N. P. W. College Andhalgaon

15/10/2022

Principal Investigator