PESTICIDES IN FRUITS AND VEGETABLES

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A PROJECT REPORT

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In partially fulfilment for the award of the degree of

Bachelor of Science

Under the guidance of

Sri O.G.V. SAI DIVYA

DEPARTMENT OF MATHMATICS

SIR C. R. REDDY COLLEGE FOR WOMEN
(Affiliated to Adikavi Nannaya University, Rajamahendravaram)
ELURU, W.G.Dist., (A.P)

2021-2022

Community Service Project Report

Submitted in accordance with the requirement for the degree of ..B.Sc

Name of the College: SIR CRR COLEGE FOR WOMEN, ELURU

Department: Mathematics

Name of the Faculty Guide: O.G.V. Sai Divya

Duration of the CSP: From 25-2-22 To 25-4-22

Name of the Student: Nulu. Thanusha Rani

Programme of Study Pesticides in fruits and Vegetables

Year of Study: 2021-2022

Register Number: 203307137411

Date of Submission: 2-5-2022

Certificate from Official of the Community

This is to certify that Nulu Thanusha Rani (Name of the Community Service Volunteer) Reg. No 203307137411 of SIR.CRR college for women, Eluru (Name of the College) underwent community service in pesticides in fruits and Vegetables (Name of the Community) from 25-2-22 to 25-4-22

The overall performance of the Community Service Volunteer during his/her community service is found to be Good (Satisfactory/Good).

S.S.L. Sabarish
Department of Mathematics
Authorized Signatory with Date and Seal

DECLARATION

We hereby declare that the project entitled "***Pesticides in Fruits and Vegetables***" authentic work carried out by us under the esteemed guidance **Sri O. G. V. Sai Divya** for the partially fulfilment of the award of Bachelor of Science (B.Sc) degree and we further admit that this has not been submitted by us anywhere else for the award of any other degree.

Name: Nulu . Thanusha Rani
Regd. No: 203307137411

ACKNOWLEDGEMENT

We feel highly grateful to Smt. P.Sailaja, Principal, Sir C.R.R College for Women, Eluru, for being a motivating factor throughout the course of the project.

We are thankful to **Smt. S.S.L. Sabari Kumari**, Head of the Department, Department of Chemistry, Sir C R Reddy College for Women, Eluru for providing necessary facilities during our work

We take this opportunity to express my deep sense of gratitude to our project guide, **Sri. O.G.V. Sai Divya**, for her keen interest and valuable guidance right from the inception of the project till the complete execution of the same. We also thank other staff for their help.

I am using this opportunity to express my gratitude to all he staff who supported me throughout the course of this project. I am thankful for their aspiring guidance, invaluably constructive criticism and friendly advice during the project work.

We will be failing in our duty if we do not acknowledge the continued encouragement and support we have had from all our family members, without whose help this project would not have been completed.

CONTENTS

INTRODUCTION

Chapter 1
INTRODUCTION

Pesticides are a numerous and diverse group of chemical compounds. Which are used to eliminate pests in agriculture and house holds. They enable the quantities and the quality of crops and food to be controlled and help to limit the many human diseases transmitted by insect or rodent vectors. However despite their many merits, pesticides are some of the most toxic environmentally stable and mobiles substances in the Environment their excessive use has a deleterious effect on humans and the environment their presence in food is particularly dangerous with their Environmental stability, ability to and toxicity, pesticides may places the human body at greater risk of disease and poisoning.

Pesticides enter the environment in various forms (e. g: powders, moistened powders, for preparing aqueous solutions and concentrates for making up emulsion or sprays) pesticides are of enormous importance increasing the yields and quality of agriculture products they are used to:

- ⇨ Control the numbers of pests destroying whole plants or their parts;
- ⇨ Increase the production of animal and plant biomass
- ⇨ Combat microorganisms causing farm produce to rot and to decay
- ⇨ Combat algal, bacteria, fungi, and weeds;
- ⇨ Combat animal pests damaging crops (e. g: mites, aphids, insects, larval and nematodes) ;
- ⇨ Stimulate or inhibit plant-growth processes (e. g: remove Excess flowers, destroy foliage or dry out plants) ;
- ⇨ Make possible the action of other substances
- ⇨ Counteract growths on boats and ships
- ⇨ Kill harmful organisms in the farm buildings the home, hospitals , stores and vehicles

The widespread use of pesticides not only contaminates water, soil, and air but also causes them toaccumulation in crops (e. g :fruits and vegetables). Pesticides are transported mainly by rain and wind from their points of application to crops and land. Where their presence be undesirable or harmful.

A pesticides can be defined as any chemical used to directly control pest populations or to prevent or reduce pest damage. Pesticides also include compounds intended for use as plant growth regulators, defoliants, or desiccants even though they are not normall used as pest control agents, nor are they usually effective as such. It is important to remember that the"-cide" in pesticides means "to kill", these products can be dangerous if not used properly.

Pesticides use has increased agricultural production worldwide and there by contributed to foodsecurity . With the expect 30% increase of world population more than 1100 pesticides have been widely used in various combinations at different stages of cultivation and postharvest storage. Despite their Usefulness' pesticides could potential risks to food safety and the environment. Pesticides could possible remain in foodstuff, such as fruits and vegetables which pose a potential threat to human and animal the use of pesticides during production of ten leads to the presence of pesticides in fram .

SCOPE

SCOPE

Pesticides us with the expected 30% increase off world population 9.2 billion by 2050, there is a projected demand to increase food production by 70% according to the calculation by population, there will be Continuing need for pesticides based Solution. For pest control and food security in the future to increase food product to meet the increasing food supply more than 1100 pesticides have been widely used in various combinations at different stages of cultivation and Postharvest storage. Despite their usefulness. Pesticides could pose potential risks to food safety and the environment pesticides residues could possibly remain in food stuff.

Such as fruits and vegetables, which pose a potential threat to human and animals health for this reason, most countries or regions have drafted rigorous regulations to levels for compliance. However, pesticides in crop production and to monitor their residues are one of the most frequently detected xenobiotic in food analysis, especially in enormously consumed fruits and vegetables all over the world.

The EPA PGP will cover pesticides authorized for use under FIFRA, and generally includes pesticides application covered by the 2006 rule.

1. The EPA PGP will cover the following pesticides use pattern for control of.
2. Mosquitoes and other flying insert pesticides
3. Weed and algae
4. Animals pests
5. Forest canopy pest

Pesticides are among leading causes of death by self poisoning, in particular in low and middle income countries as they are intrinsically toxic and deliberately spread in the environment, the production regulations and use of pesticides require strict regulation and control. Regular monitoring of residues in food and the environment is also required.

Wide scope screening of pesticides fruits and vegetables using information dependent aca vision employing 41+PLC-TOF-MS and automated Ms/Ms library for simultaneous screening and identification of 427 pesticides in showed that 97.4% of the pesticides in fresh fruits and vegetables had the screening detection limit less than 50mgkg and more than 86. 7% pesticides two objectives in relation pesticide.

1. To ban pesticides that are most toxic to human, as well as pesticides that remain for the longest time in the environment.

2. To protect public health by setting maximum limits for pesticides residues in food and water.

Scope of pesticides in fruits and vegetables:

- Pesticides us with the expected 30% increase off world population 9.2 billion by 2050, there is a projected demand to increase food production by 70% according to the calculation by Population, there will be Continuing need for pesticides based Solution.
- For pest control and Food security in the future to increase food product to meet the increasing food supply more Than 1100 pesticides have been widely used in various combinations at different stages of Cultivation and Postharvest storage.
- Despite their usefulness. Pesticides could pose potential Risks to food safety and the environment pesticides residues could possibly remain in food stuff.
- Such as fruits and vegetables, which pose a potential threat to human and Animals health for this reason, most countries Or regions have drafted rigorous regulations to levels for Compliance.
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- Monitoring of residues in food and the environment is also required.
- Wide scope screening of pesticides fruits and vegetables using information dependent aca Vision employing 41+PLC-TOF-MS and automated Ms/Ms library for simultaneous screening and Identification of 427 pesticides in showed

that 97.4% of the pesticides in fresh fruits and Vegetables had the screening detection limit less than 50mgkg and more than 86. 7% pesticides

- Two objectives in relation pesticide.

1. To ban pesticides that are most toxic to human, as well as pesticides that remain for the longest time in the environment.
2. To protect public health by setting maximum limits for pesticides residues in food and water.
3. A total of 111 pesticides were nalyzed in vegetable samples. Out of a total of 111 pesticides, 85 pesticides were analyzed on LCMS/MS and remainder 26 pesticides were on GC-ECD. GC-MS was used for ion confirmation for 26 analytes.

   2.4.1 Gas chromatography-electron capture detector (GC-ECD) analysis
4. A total of 26 compounds were analyzed with the help of a thermo Scientific Trace 1310 gas chromatograph with an auto-sampler (AS 1310), coupled with an Electron Capture Detector (ECD).
5. The separation was performed on a Restek- Rxi-5ms capillary column (30 m long × 0.25 mm internal diameter × 0.25 µm film thickness).
6. Sample injection was operated in the splitting mode 1:10, with an injector temperature of 250ºC and the detector temperature was 300ºC.
7. The oven temperature was held initially at 110oC for 1 minute, programmed from 110 to 210ºC at 10ºC/min. and held for 1 minute at 210ºC, further programmed from 210 to 300ºC at 5ºC/min. and finally held at 300ºC for 6 minute.
8. Makeup gas with a flow of 25.0 mL/min.
9. The thermo Scientific Chromeleon 7.2 version software was used for system controanalysis and acquisition.
10. 2.4.2 Liquid chromatographytandem mass spectrometry analysis total of 85 pesticides were analyzed by LCMS.

OBJECTIVES

OBJECTIVES

Analyse food and chemical issues determine how science affected food through production, packing and health. Debate and benefits and risks of pesticides use Calculate the standard liquid measurements for mixing of agricultural chemicals.

To develop a method of accessing imports on human health and ecosystems considering the most used pesticides to make the general method operable for any kind of crops growth in

Mediterranean green house

1. Understand pesticides.

2. Identify common four misted chemicals.

3. Determine the deference between chronic and acute toxicity.

4. Discuss explosive routes of chemicals.

5. Identify personal protective equipment (PPE).

6. Examine signs of pesticides poisoning.

7. Look at first and treatment.

8. Recognize proper storage and disposal practices.

9. To describe occurrence in the environment & sampling regime of atrazine in public water suppliers.

10. To assess Kentucky water systems complete with the EPA regulations identity the health implications & public health role.

11. To determine if the current monitoring regions is adequate in detecting atrazine levels of comer with focus on the critical time of the exposure the atrazine.

12. To investigate pesticides abuse on fruits and vegetables in Tianjin area to detect pesticide residues in fruits and vegetables.

13. To study the methods for reducing pesticides residues in fruits and vegetables

METHODS

- A questionnaire on the pesticides application during growing in fruits and vegetables was administered to 185 formers Tianjin area.
- According to the information from the questionnaire survives fruits and vegetables samples was collected in four seasons around the year and measured for organ phosphorus pesticides reduces by gas chromatography.
- Fruits and vegetables samples contained pesticides residue were treated by scald immersion in 0.15 % and 0.30 % detergent solution immersion impure water peeling cutting root and pesticides reduces were measured before and after the treatment.
- To ban pesticides that most toxic to humans, as well as pesticides that remain for the longest time in the environment.
- To protect public health by sitting maximum limits for pesticides residues in food and water.

METHODOLOGY

Chapter 2

METHODOLOGY

In addition, fruit also we have found in 20 types of pesticides residue in mango trees found 21 types of in orange trees. In the method of minimizing pesticides residue that the washing with water first soak in water 10 min flow

STEP 1 : collection of respective samples.

STEP 2 : Isolation of residue extraction .

STEP 3 : Separation of co-extracted matrix components clean up.

STEP 4 : Identification and quantification of far get analysis.

STEP 5 : confirmation of results by an additional analysis.

Methodology are two types

1. primary method
2. Secondary method.

Primary method

Some primary methods are

*Dusting

* Sparing

* Granular

* Speed pelleting/ seed dressing

* Seedling root dip

* Sett treatment

* Trunk/ steam injection

* Padding

Dusting :

Dusting In carried out in the morning hours and during very light air stream. It can be done manually or by using dusters. Some times dust can be applied in soil for cheaper and suited for dry land crop pest control.

Spraying :

Spraying is normally carried out by mixing EC or WP formulations in water.

Grnular:

Highly toxic pesticides are handled safely in the form of granules. Granules can be applied

directly on the soil or in the plant part

• Broadcasting

• In furrow apply

• Seed dressing

• Spot application

• Ring

• Root zone

• Pralinage

• Broadcasting :

Granules are mixed with equal quantity of sand broadcasted directly on the or in the film of standing water rice nursery carbonfuran 3%G applied 1.45 kg/8 cent rice nursery in this film of water and impound water for 3 days.

• **In furrow application:**

Granules are applied at the time of sowing in furrow applied@3g sorghum shoottly.

• Seed dressing :

After the establishment of the planets the granules are applied a little away from the plant (10-15cm) in a furrow.

• Spot application :

Granules are applied@5cent away and 5 cm on the sides of plant. This reduces the quantity of insecticide required.

• Ring :

Granules are applied in a ring form around the trees.

• Root zone :

Granules are encapsulated and placed in the root zone of the plant by mixing it with

equal quantity of sand in the central whoral of crops like sorghum maize fruit , vegetables ,sugar

cane to control internal borders.

• Pralinage :

This surface of banana sucker intended for planting is trimmed . The sucker is dipped in wet clay slurry and carbon 3G is sprinkled to control burning nematode

- **Speed pelleting/speed dressing :**
  The insecticide mixed with seed before sowing sorghum seed are treated with chlopyriphos riced to control shoottly. The carbonfuran 50 sp and imdacloprid is directly used as day seed dressing insecticide against cotton sacking pests.
  Seedling root dip :

  It is followed to control early stage pests in fruits to control sucking pests and stem borer in early transplanted crop a shallow pit cined with polythene sheet is prepared in the field. To this 0.5 kg urea in 2.5 litres of water prepared separately are poured .The solution is made up to 50ml with water and the root of seedlings in boundless are dipped for 20min before transplanting

- **Sett treatment:**
  Treat the sugar cane and fruits setts in 0.05%malathion for 15 min to protect them from scale . Treat the fruits setts in 0.05% . Imdacloprid 70ws@ 175g/ha for 15min to protect them from termies.

- **Trunk/steam injection :**
  This method is used for the control of coconut pests like black headed caterpillar mite ect.,Drill a downward slanting hole of 1.25cm diameter to a depth of 5cm at a light of a about1.5 m above ground level and inject 5ml of mono crotophos 36 WSC into the stem and plug the hole with cement or clay mixed with a fungicide pseudo stem injection of banana an injecting gun or hypodermic syringe is used for the control of banana aphid vector of bunchy top diseases.

- **Padding :**
  St borers of mango silk and cotton and cashew can be controlled by this method.
  Bark of infected tree (5*5 cm) is removed on three sides leaving bottom as a flop. Small quantity as absorbent cotton is placed in exposed area and 5-10ml of mono crotophos 36 WSP is added using an inc filler close the flap and cover with clay mixed with fungicide.

Name : P . Kanaka Sri

Roll Number: 203732

Farmer name:Venkatalakshmi

Age: 45

Type of farming: Tamota

Area : Vatluru

Name :M . Sai Jyothi

Roll Number: 203729

Farmer name : Ramarao

Age: 37

Type of farming: Banana

Area : Nagavaram

Name:M . Sai Prasana

Roll Number:203728

Farmer name: Lakshmi

Age: 47

Type of farming: Brinjal

Area : Denduluru

Name: P . Naga Durga Mounika

Roll Number: 203731

Farmer name: p. Venkateswararao

Age: 40

Type of farming: banana

Area : Ramaraogudem

Name:K . Ishwariya

Roll Number: 203723

Farmer name: Prasad

Age: 49

Type of farming: corn

Area : Jogannapalem

Name: K . Anitha

Roll Number:203725

Farmer name: Nirmala

Age: 50

Type of farming: Mirchi

Area: Bommuluru

Name: N.Thanusha Rani

Roll Number: 203730

Farmer name: M.srinivasa

Age: 50

Type of farming: Guava

Area: Thotagudem

Name: G . Divya

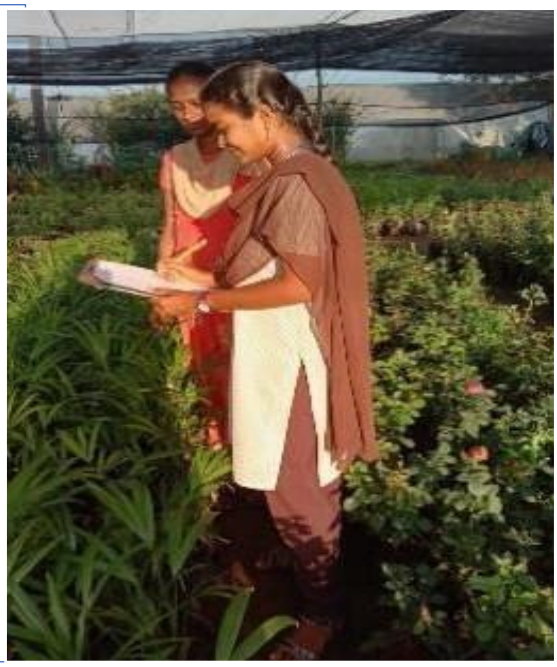
Roll Number:203721

Farmer name : ck sindhu

Age: 29

Type of farming: Apple

Area:Bommuluru



Name: M . Sandhya

Roll Number:203704

Farmer name: Yesu babu . madasi

Age:42

Type of farming: corn

Area: Krishnapuram

Name:K . Sruthi

Roll Number:203724

Farmer name: Baburao

Age:40

Type of farming: Mirchi

Area: Thotagudem

Name:Likitha.R

Roll Number: 203726

Farmer name: R.Koteswara Rao

Age:45

Type of farming: Coconut

Area: Pedavegi

Name:Durga mahalakshmi

Roll Number: 203703

Farmer name: Koteswarao

Age:48

Type of farming: sugar cane

Area: Vatuluru

Name:P . Hima Bindhu

Roll Number: 203734

Farmer name: Y . Chanti

Age: 55

Type of farming: Mango

Area: Hanuman Junction

Secondary Methodology For Pesticides

Both EPA'S National Pesticides and National water programs assess the effect of pesticides on aquatic ecosystems using approaches were developed with high quality data using rigorously peer reviewed assessment methodology.In characterizing pesticides effects as well as chronic and sub-lethal effects on growth survival and reproduction in their assessments.

*Are legally defense under our statutory mandates.

*Are implementable at the federal and state level.

*Are developed as quickly and efficiently as possible.

*Reflect stakeholders input and comments.

*Multi residue determination of Pesticides in wine by electrospray lonization liquid chromatography tandem mass spectrometry (Ls/Ms/Ma).

*Multi residue determination of Pesticides in wine by GL/MS triple quad (GL/MS/MS).

*Limit of quantification:0.010ppm(10ppb) consider the lowest worldwide standard for most agrochemicals (MRL'S).

*Values <0.01ppm consider non-defectable.

*Includes fungicides, insecticides,aracnicides and herbicides.

*Lab values stored in LCMS database

The water flow third wash are at a time for 20mins.It can reduce the pesticides vesidue up to 60-70% well get fruits and vegetables that have less pesticides residue vinegal baking soda.Turmeric powered is also used to remove Pesticides and help to kill germs in fruits and vegetables.

Current Activities For Developing Common Effects Methodology For Pesticides:

A FIFRA (Federal Insecticides, Fungicides and Rodenticide Act) Scientific Aduisory pane(SAP) meeting was held in late January 2012.The FIFRA SAP is composed of biological statisticians toxicologists and other experts who provide independent scientific advice to EPA on a wide range of health and safety issues related to pesticides a common effects methodology.

The SAP review was highly favorable and the SAP made a number of recommendations for EPA to move forward with their approach in a report issued in April 2012.

QUESTIONNAIRE

Chapter 4

QUESTIONNAIRE

SIR CRR COLLEGE FOR WOMEN

TITLE : PESTICIDES IN FRUITS AND VEGETABLES

QUESTIONNARIE

NAME:

What type of crops are _____

1.Experiences in vegetables producing ?

(a)< 5 years (b) 5-10 years (c) > 10 years

2.Protection measure during spraying ?

(a) no gloves and masks (b) gloves & masks

3. where do you store pesticides?

(a) store room (b) garden,openfield

(c) coolstorages,refrigerator

4. Do you follow instructions on the label

(a) yes (b) No

5. How many hours do you work in the field

(a) 3-4hrs (b) 5-7hrs (c) >7 hrs

6. How many pesticides do you apply per month

(a) 1 (b) 2 (c) none of these

7. which type of field you have

(a) vegetables (b) fruits

8. pesticides application timing

(a) morning (b) afternoon (c) none

9. positions of spray head

(a) 20cm above plants tops

(b) at plant tops

(c) targeted insects & diseases

10. pesticide spraying techniques in field

(a) spray against the wind (b) spray with the wind

(c) walk forward (d) walk backward

11. Number of spray application per crop

(a) <3 (b) 3-4 (c) 5-7 (d)>7

12. pesticides are poisonous

(a) agree (b) natural (c) dis agree

13. sign of poisoning with pesticides

(a) burning eyes (b)cough, headache

(c) skin inflammation (d) others

14. Type of pesticides applicator

(a) knapsack sprayer (b) sprayer hose

(c) motorise sprayer (d) none of the above

15. Do you think that pesticides affect the environment

(a) Strongly agree (b) agree

(c) Strongly disagree (d) disagree

16.which age is harmful to pesticides

(a) Below 20 (b) 25

(c) Above 50 (d) all of the above

17. which disease to causes the pesticides

(a) T.B (b) cancer

(c) sugar (d) none of the above

18. Insecticides kill

(a) Both harmful and useful insects (b) Specific insects

(c) Harmful insects (d) None

19. The most common pesticides used in india is

(a) DDT (b)Endrin

(c) BHC (d) both a&b

20. Pesticides generally attack

(a) Muscular system (b) Respiratory system

(c) Nervous system (d) None

PROBLEMS IDENTIFICATION

Chapter 4

PROBLEM IDENTIFICATION

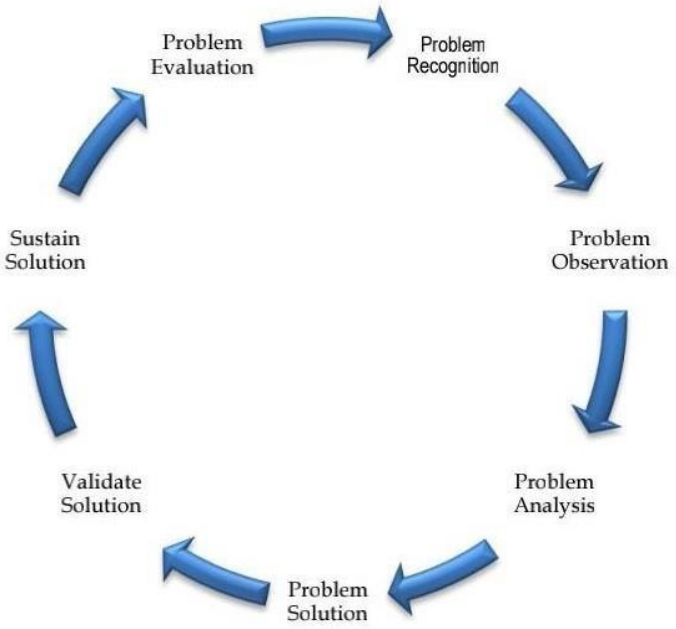
- pesticides are among leading causes of death by self-poisoning in particular in low and middle income countries as they are intrinsically toxic and deliberately spread in the environment, the production, distribution, and the use of pesticides require strict regulation and control. regular monitoring of residue in food and the environment is also required.
- The EPA PGP will cover pesticides authorized for use under RIERA, and generally includes pesticide applications covered by the 2006 rule.
- The EPA PGP will cover the following pesticide use patterns with discharges to waters of the u.s for the control of:
- Mosquitoes and other flying insect pests
- Weed and algae
- Animal pests
- Forest canopy pest
- Direct impact on humans
- Possible carcionogenicity, neurotoxicity, reurotoxic reproductive and metabolic toxicity of pesticide accumulating in the body
- Impact on environment soil contamination Surface water contamination
- Ground water contamination
- Effect on soil fertility, air contamination
- Effect and destruction of useful organisms
- Non-target vegetation contamination
- Increase the production of animal and plants biomass
- Combal micro-organisms causing from produce and to delay
- combal algae,bacteria,fungi and weeds
- There are numerous health hazards linked to the use of pesticides . pesticides can have grace effects on health of any body consuming fruits or vegetables highly contaminated with pesticides

- High levels of pesticides in food can lead to development of diseases such as cancer,kidney and lung aliments .
- childrens have developing organs,prone to catching infections and diseases .
- Any exposure to these high chemical residues can lead to childhood cancers,mental health problems such as autism and attention deflict hyper activity disorder .
- pesticide may also be transported by rain and wind from the points of application to adjacent areas where their presence may be undeseirable or harmful .
- Endocrine disruptor
- Thyroid disruption properties in birds,amphibians and fish
- carcinogen
- suspectibity in fungal infection
- Earthwarms became infected with monocystid gregarines
- Interact with vertebrate immune systems
- Animal infections,disease outbreaks and higher mortality
- Immunotoxicity primarily caused by the inhibition of serine hydrolases or esterasas
- oxidative damage
- Impaired metabolic functions such as thermoregulation
- Respiratory,cardivascular,neurological and immulogical toxicity in rats and humans
- Effect various physiological and behavioural traits of beneficial orthropods,particularly hymenopterans
- Reduced food availability and adverse secondary effects on soil invertebrates and butterflies
- Decreased species abundance and diversity in small mammals
- Pesticides have some direct harmful effect on plant including poor root hair development,shoot yellowing and reduced plant growth
- The use of pesticides is that their resides persist in water and other components of the environment as they are not easily degraded in the environment

- pesticides also have the potential to harm the nervous system ,the reproductive system,and the endocrine system
- pesticides can contaminate soil,water,turf,and other vegetation
- pesticides can reduce populations of helpful insects
- pesticides may lead to polination problems
- Adverse health effects on farmers
- crops may get contaminated with harmful substances
- pest resistance in the long run
- pesticide poisoning
- problematic for flora and fauna
- Ecological imbalance
- Rather unclear long-term effects

Problem Analysis

1



Analysis of the Problems:

The Method has been widely used for the Analysis GCMS Analyze, Triple Guadnepole.Traditional techniques are laborious,costly and consuming.They are several advanced techniques for the determination of pesticides.Pesticide toxicity and availableextraction methods any chemical,biological substances or mixture of substances intended for preventing,destnying,attracting,repeling or controlling pest.Reducttion of beneficial spieces resistance ground water contamination Drift of sprays and Vapours resides in food.Extraction is the Process by which toxicant is transformed from the treated bulky biological material into solvent clean up isolation of toxicant from interfing substance or solvent.

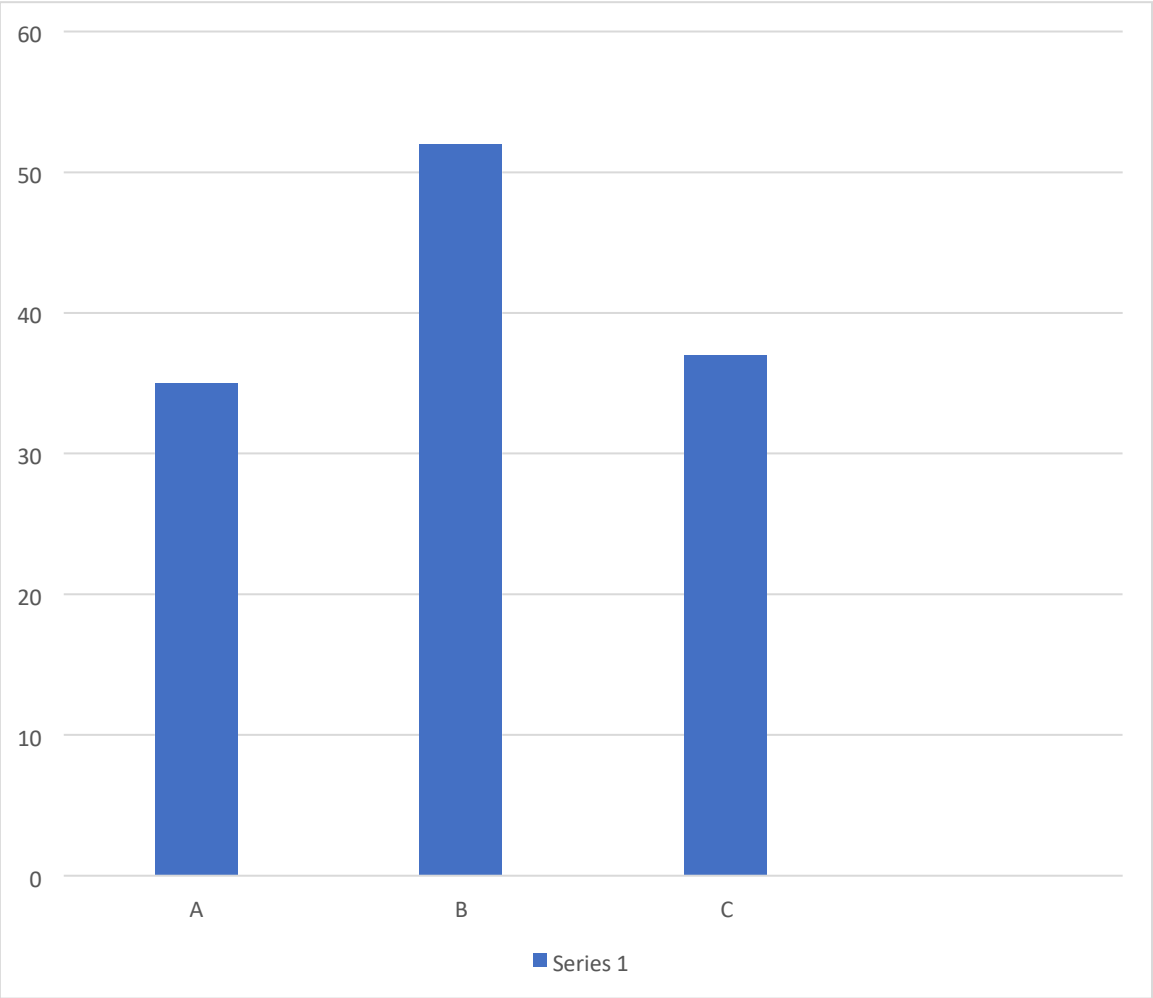
Three kinds of Spectrophotometric Methods in pesticide residue analysis.ultraviolet visible and in formal methods

- Various techniques of Chromotography
  1.Column chromatography gas chromatography liquid chromatography
  2.Affinity chromatography
  3.Inexchange chromatography

DATA TABLES

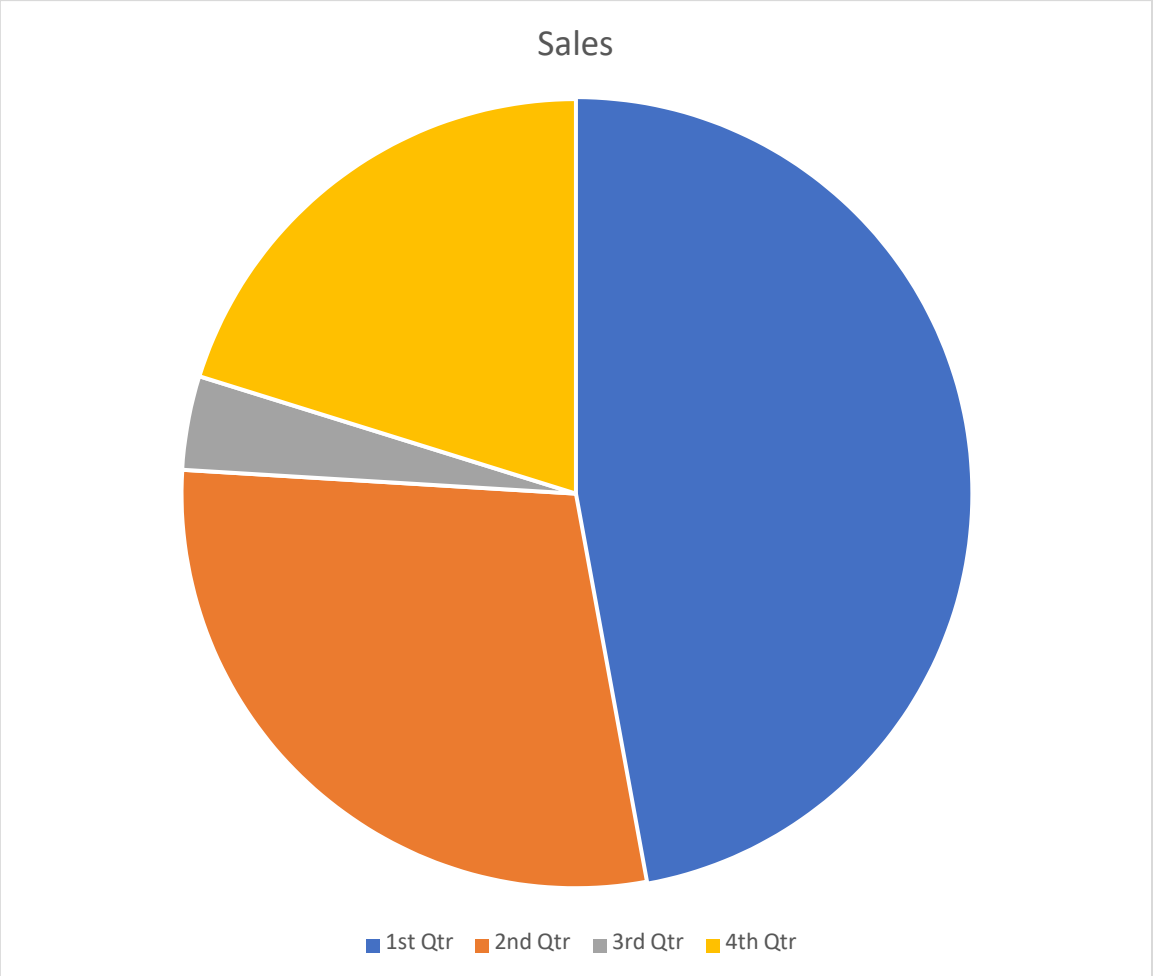
1 . Experince in Vegetables Producinig

Options	Experience	
A	5 Years	35
B	10 Years	52
C	Both A and B	37
D	15 Years	0



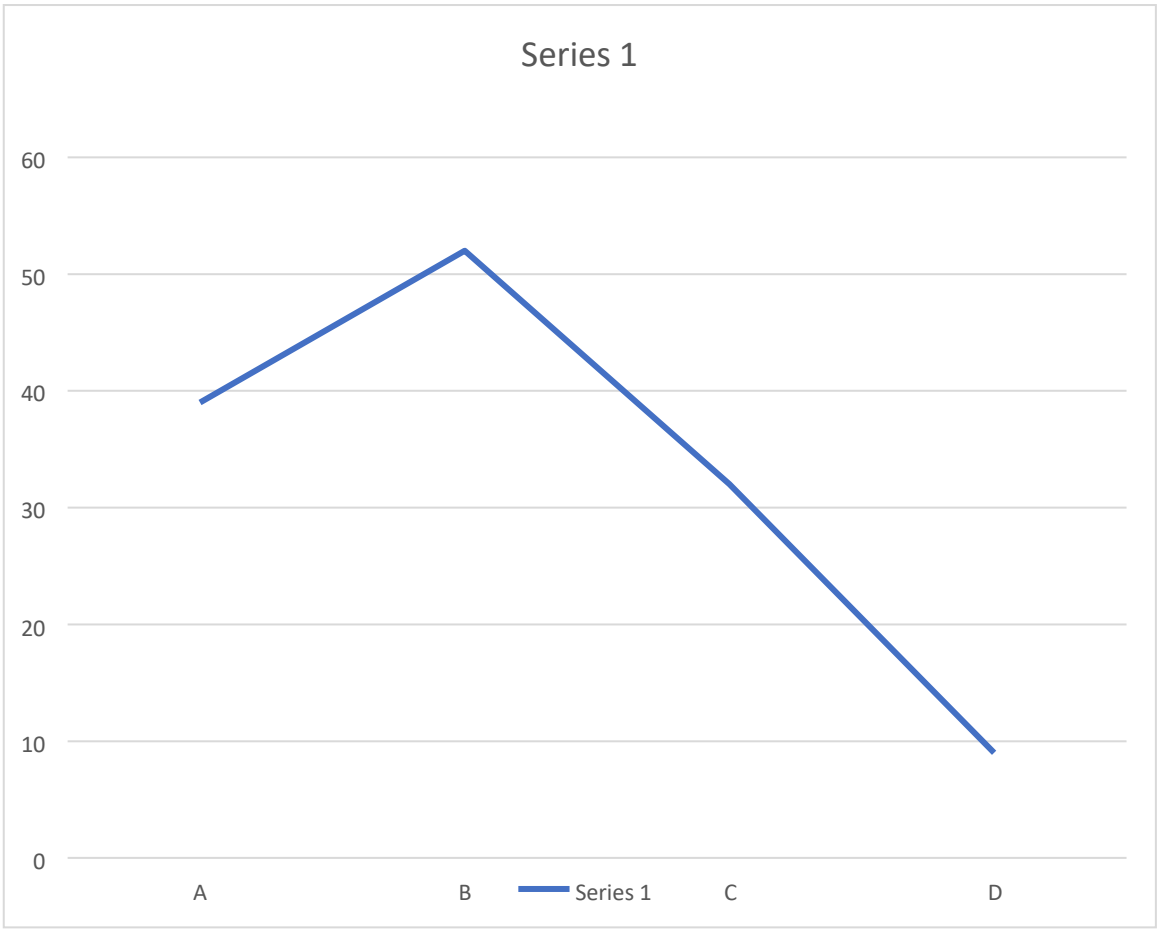
2 . Pestiside sparying Technique Used in field

opitions	techniques	
A	Spray against the world	49
B	Spray with the wind	30
C	Walk forward	21
D	Walk bckward	04



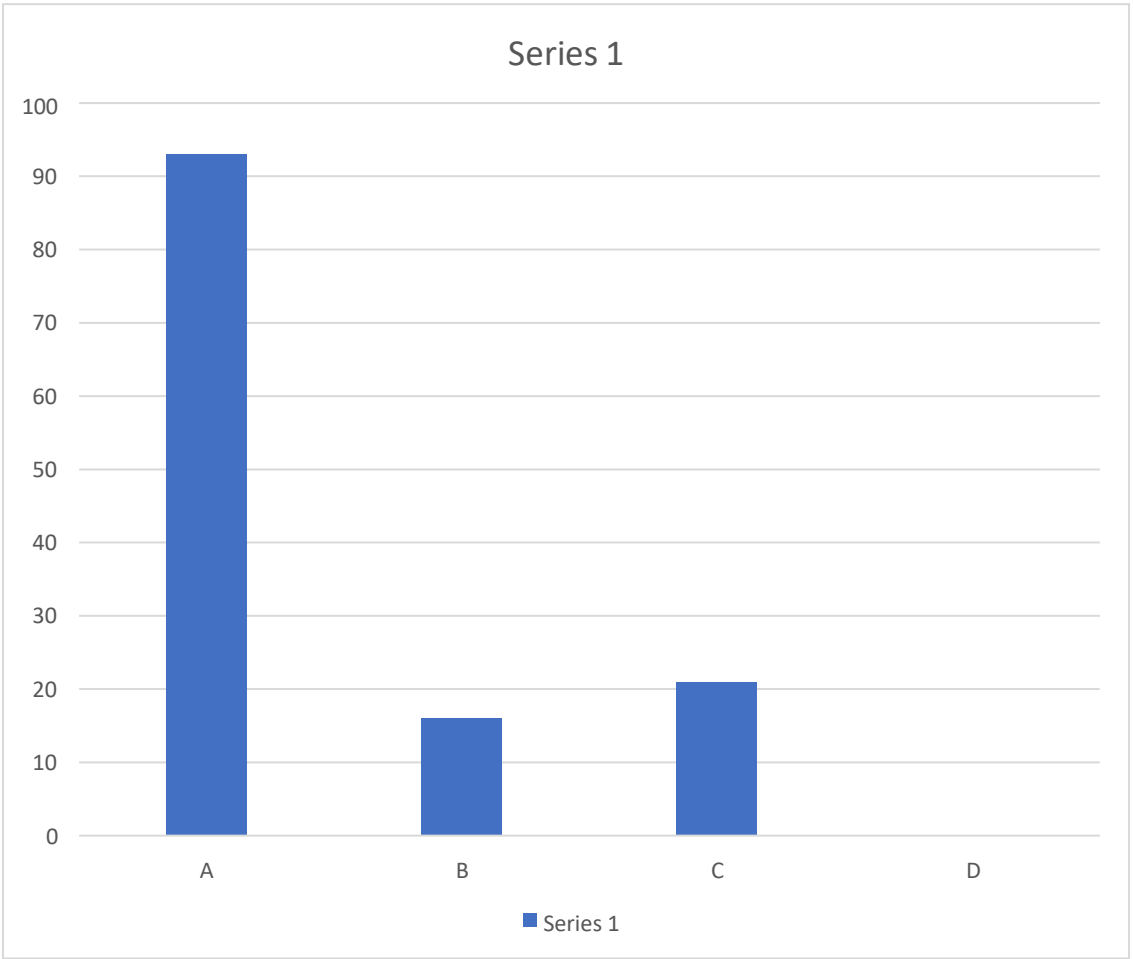
3. Number sign of passing with Pesticide

Options	Effects	
A	Burning gas	39
B	Cough and Head Ache	52
C	Skin inflowbin	32
D	Others	09



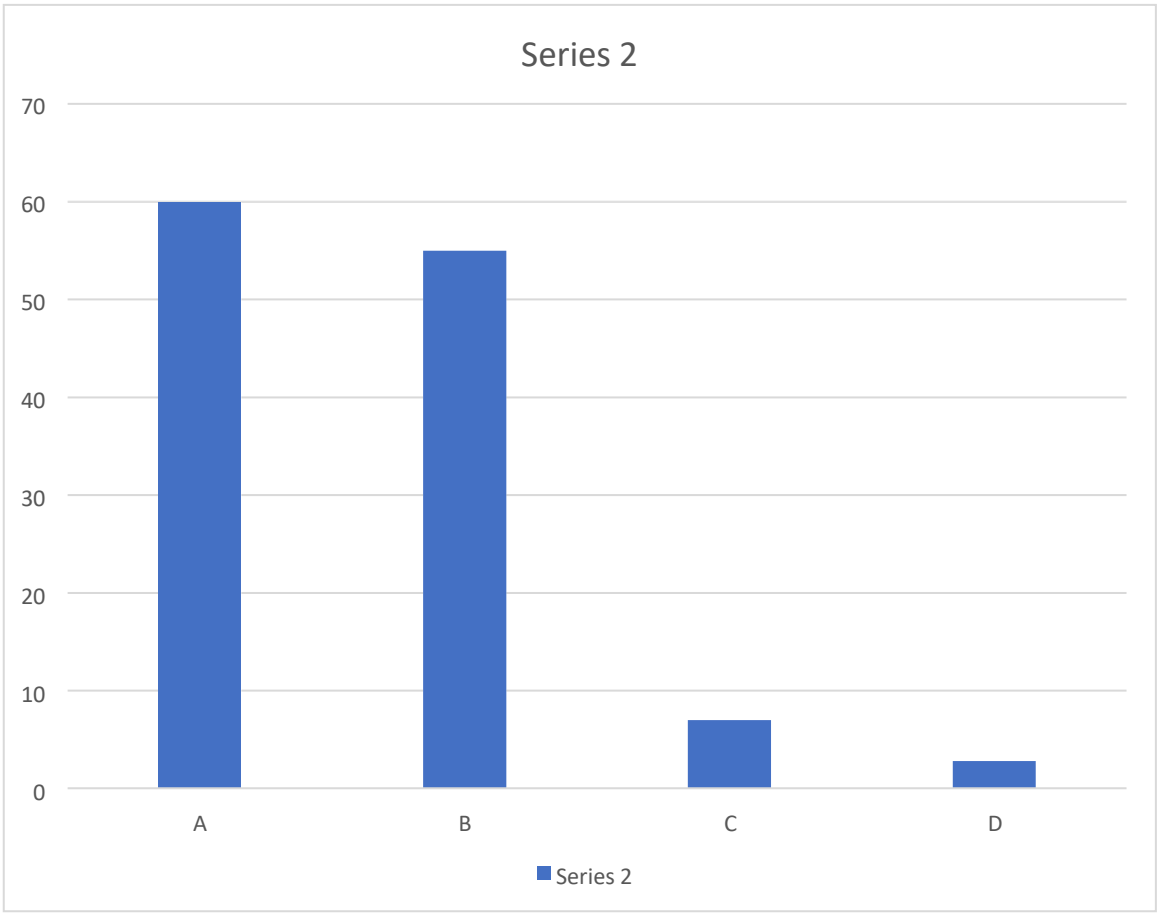
4 . Pesticides are poisonous

Opitions		
A	Agree	93
B	Natural	16
C	Disagree	21
D	Both A and B	00



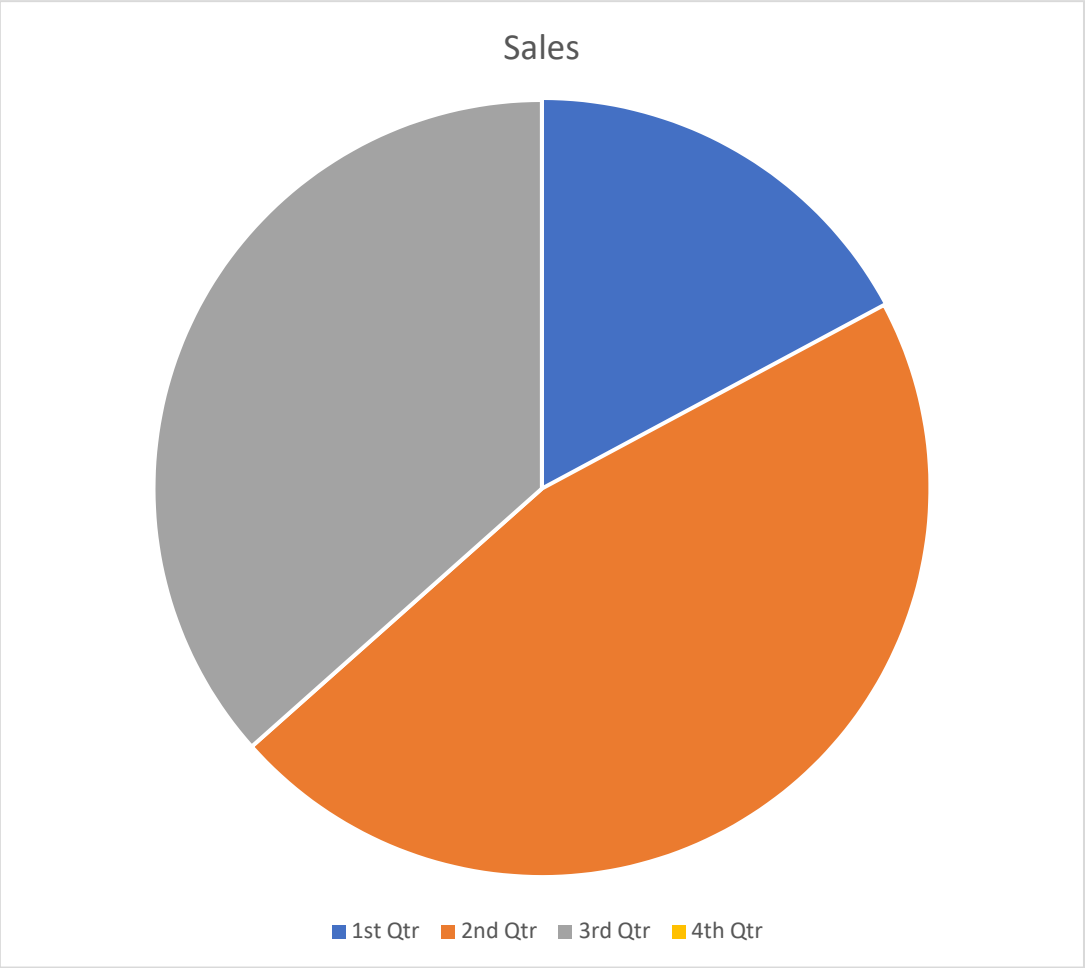
5 . Do you think pesticides affect the Environment

Opitions		
A	Strongly Agree	60
B	Agree	55
C	Storngly Disagree	07
D	Disagree	03



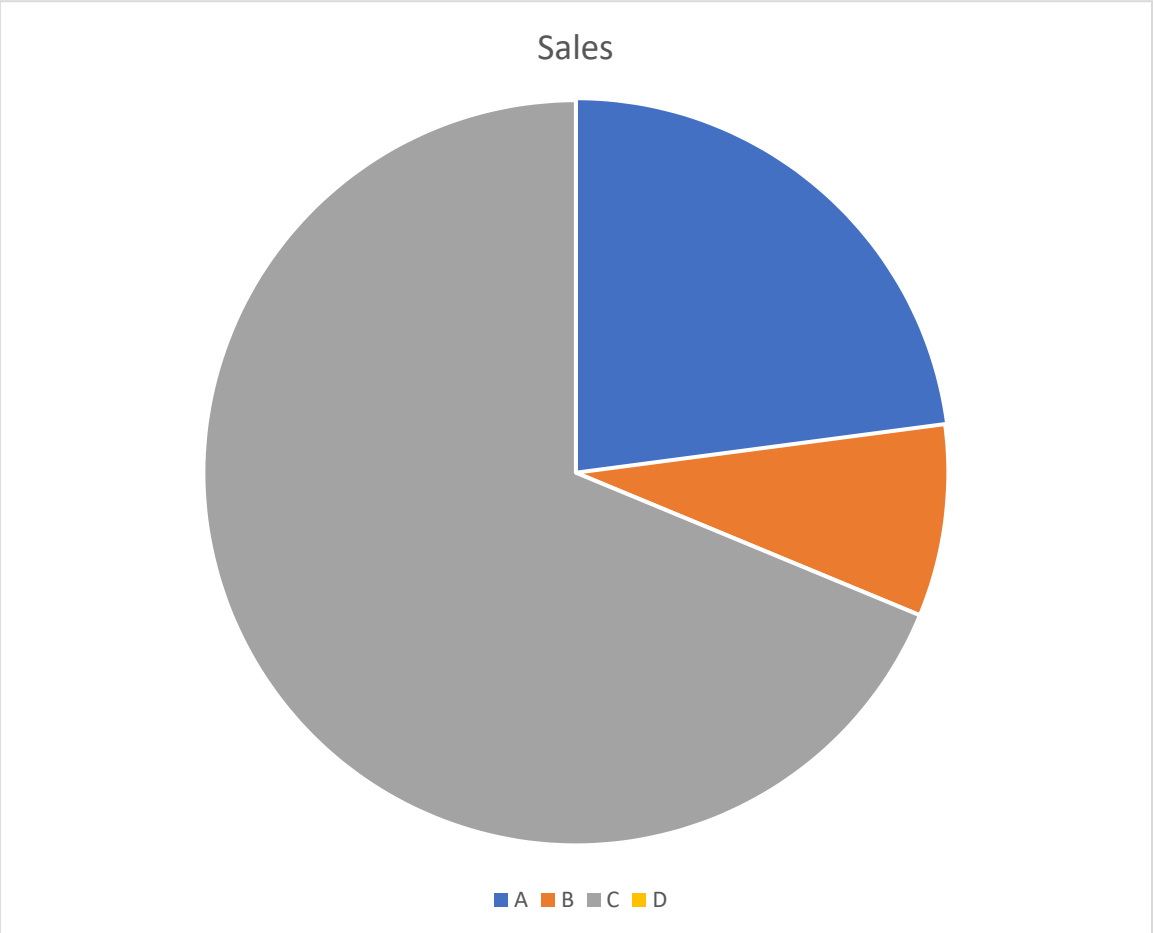
1 . How many hours do you work in the field

Opitions		
A	3.4 Hours	23
B	5.7 Hours	62
C	➢ 7 Hours	49
D	Non of These	00



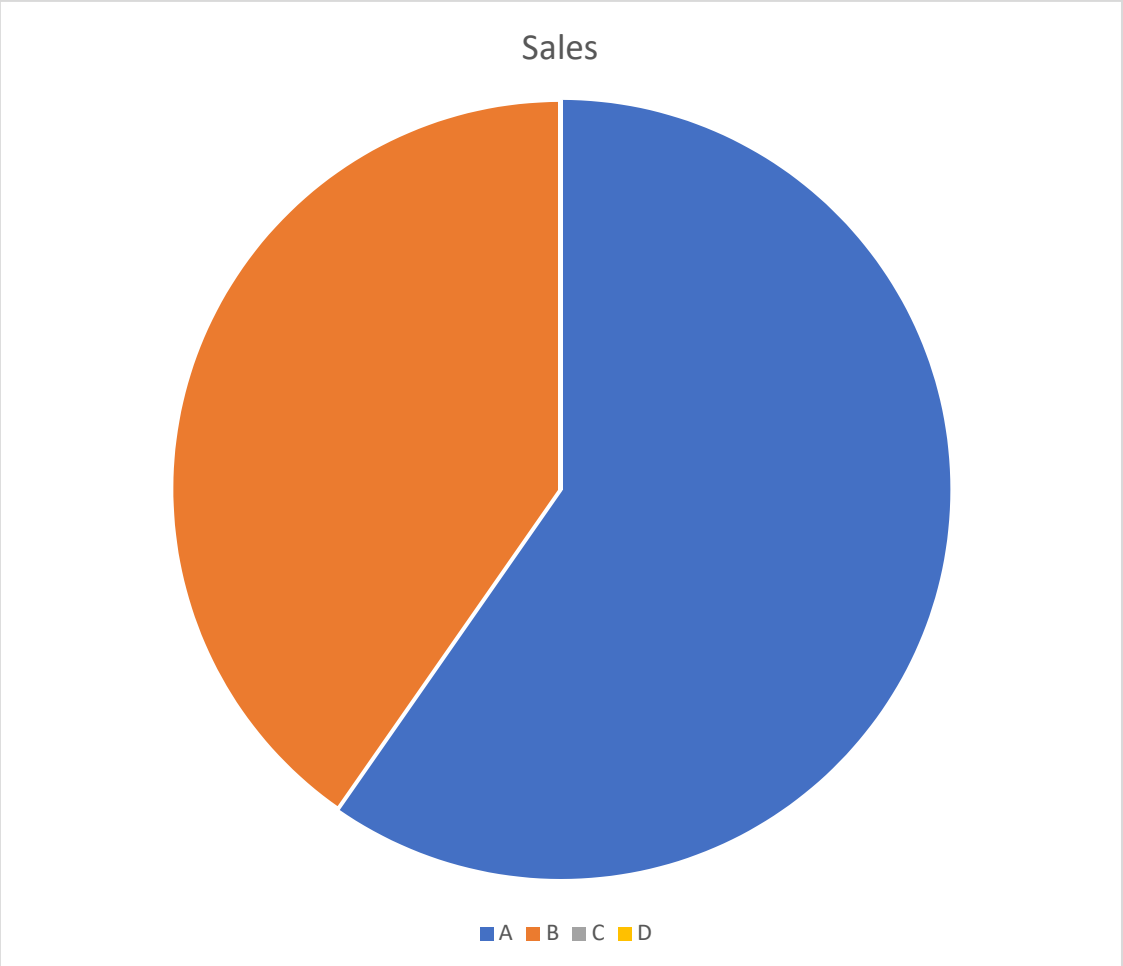
2 . How many pesticides do you apply per month

Opitions		
A	1	33
B	2	12
C	None of These	99
D	More Than 2	0



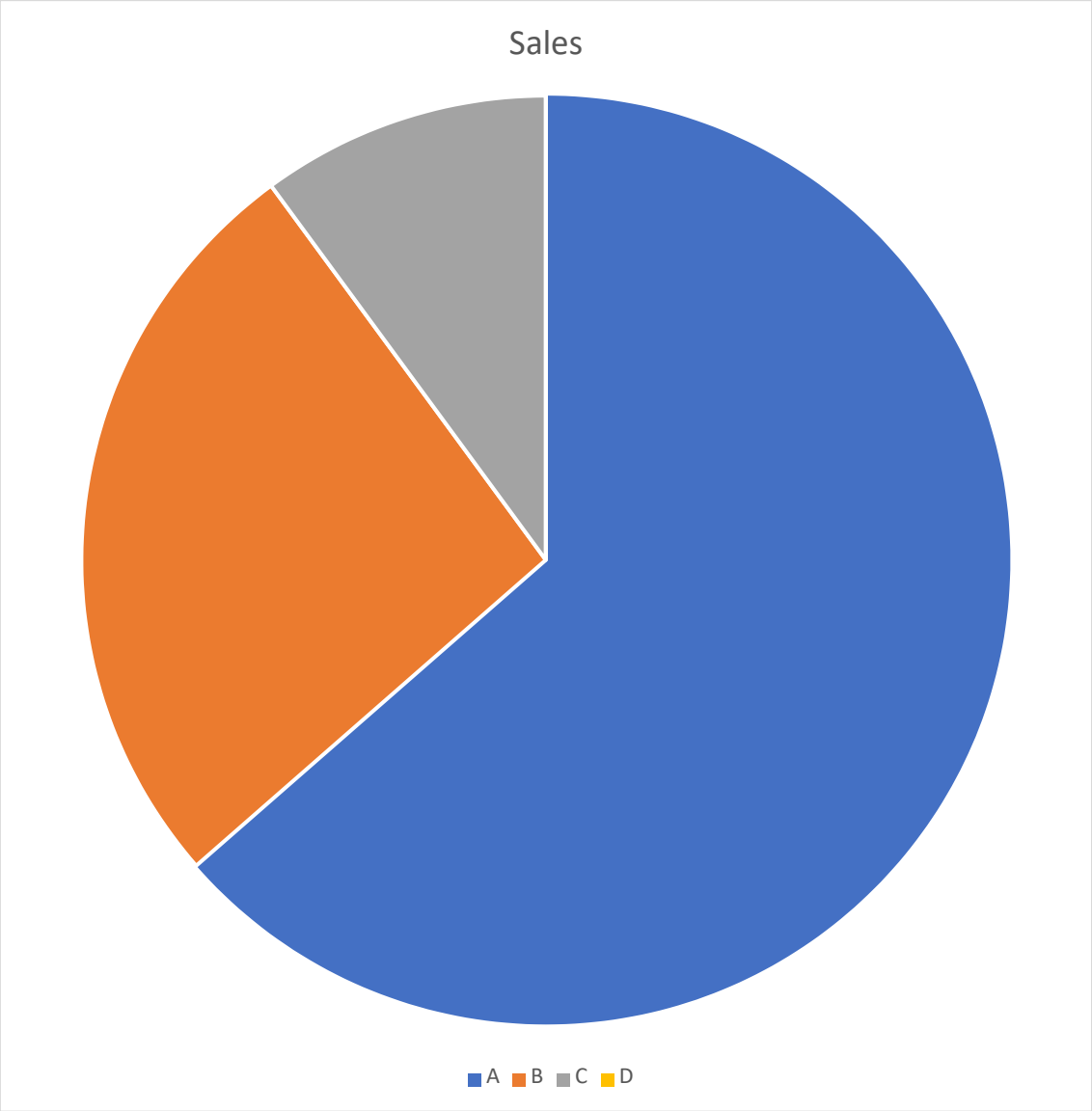
3 . Which type of field you have

Opitions		
A	Vegetables	77
B	Fruits	52
C	Both A and B	00
D	None of These	00



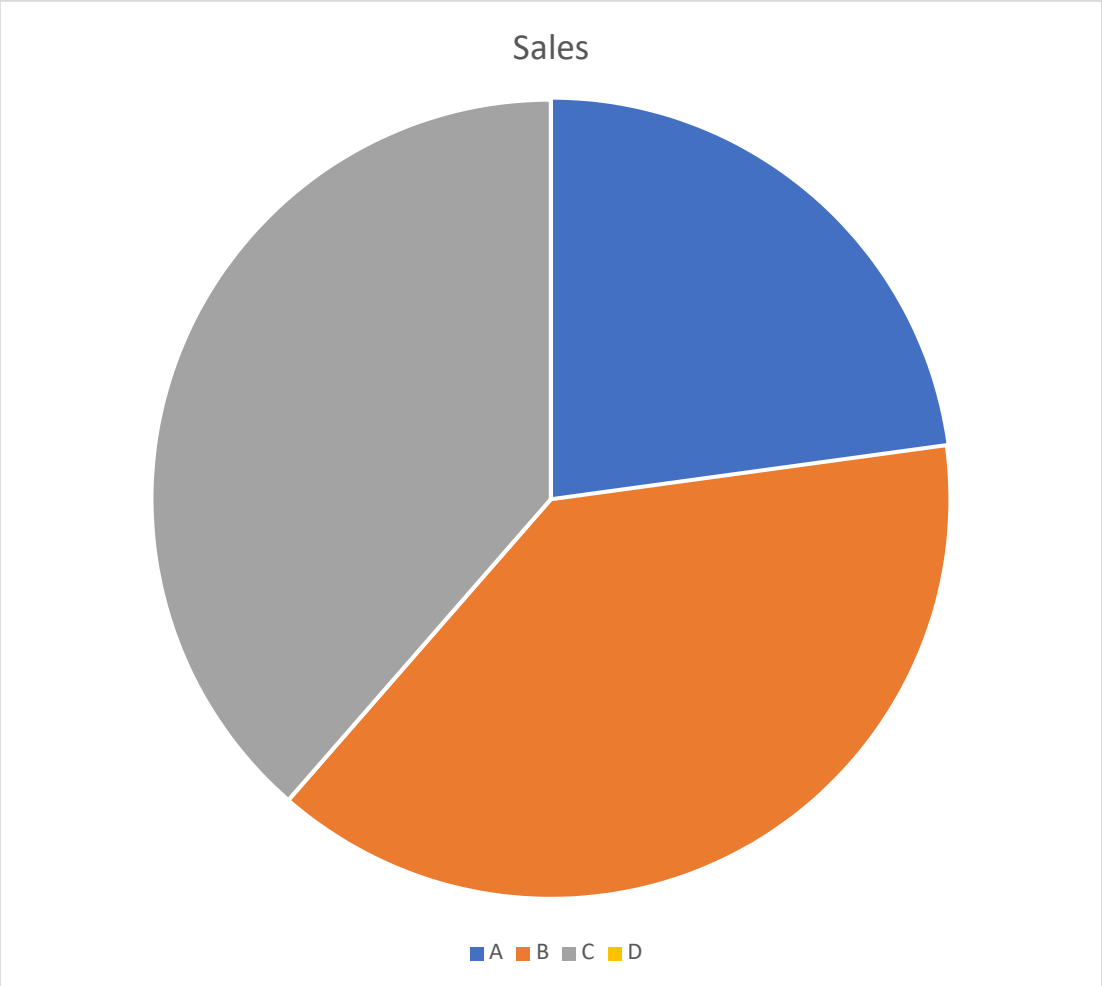
4 . Where do you store pesticides

opitions		
A	Store room	82
B	Garden,Open field	34
C	Cool storge, Refrigerator	13
D	outside	0



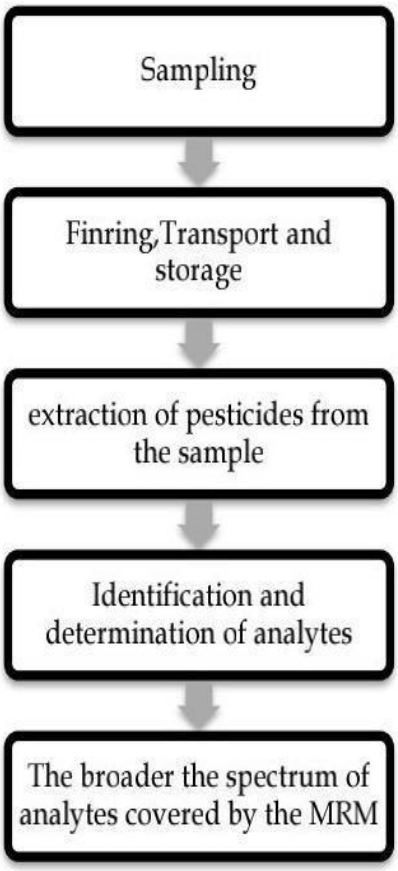
5. Positions of spray head

Opitions		
A	20cm above plants top	29
B	At plant tops	49
C	Targeted Insectse diseases	49
D	None of these	0



Analysis

- The main stages in anailtical procedures for determination pesticides In samples of fruits&vegetables
- The analysis of pesticides in biological samples continues to prevent challenges to analysts
- The number of problems crop up in the analysis of pesticides.
- The complexity and the diversity of matrices in biological



- The less additional methods are required to all analytes
- The more efficient and economical the analysis
- Less time,personal,materials……

Some of the most Commonly used solvents for pesticide residue in fruits and vegetables and acetoethyl acetate,dichloromethane,methanol and tolorence.In certain cases,the mixtures of solvents are used to improve the recovery of the methods.

RECOMMENDATIONS

RECOMMENDATIONS

➢ Collaborate with the Rotterdam convention to strengthen capacity building programs and the use of the knowledge base maintained by the Convention.

➢ Fulfill a role in supporting collaboration among developing countries to strengthen pesticide risk regulation.

➢ Explore the options to make regulatory risk data more transparent and publicly accessible. This could require long-term changes in the organization and funding of the underlying risk research and the structure of the intellectual property rights of risk data.

➢ Strengthen research and Extension in the fields of agroecology, organic farming and IPM, in particular supporting network initiatives on these themes and local universities and farmer associations in developing countries.

➢ Stop all exports of crop control products banned in the EU.

➢ Only allow the export of several restricted pesticides if these are regulated accordingly and used properly in the importing country.

➢ Support developing countries in developing an efficient process of re-evaluating pesticide registrations according to contemporary good regulatory practices in line with the FAO/WHO Code of Conduct.

➢ Buy only original products, with authorized sellers.

➢ Buy the pesticides according to your needs to reduce storage time and Surplus.

➢ Comply with all local legislations concerning storage.

➢ Pesticides should be stored Safely, locked, out of the reach of Children and unauthorized persons. They must also be out of the reach of animals.

➢ The Storage place should dry and have a good ventilation.

➢ In case of spillage follow the instructions on the label for cleaning and proper disposal.

➢ More dilute then on the label.

➢ At the lower rate than on the label

➢ Less frequently than on the label.

➢ For pests not on the label, as Long as the Site orcmp is listed and other restrictions are observed.

➢ It is illegal to apply pesticides in the following ways:

- Using less diluent (water) then on the label, thus increasing the concentration.
- Ata higher rate per acre than on the label.
- Shortening the specified interval between applications.

CONCLUSION

CONCLUSION

- Pesticides are an increasingly important part of
- Agricultural production technology but…
- Their inherent toxicily means they will continue to face striment Regulation.
- Difference in access to pesticides, or in their cost will affect Production opportunities.
- Farmers appear to be successful in adapting their pest management Strateges to difference in prices in the cases where a number of Substitudes exist.
- Pesticides are a very diverse group of chemical hence it is Difficult to explore all the ramifications .
- Microbial and faunal population in time get to lerant to Pesticides though there is considerable stress on the ecosystemic.
- Also major processes such as enzyme activity, respirations,Carbon and nitrogen mineralization are majorly effect.
- The widespread use of pesticides is in effective and economically Harmful in the long run.
- Their detrimental effect on health and environment make Them an inadequate long term solution.
- BIn addiction, most synthetic and natural pesticides are susceptible To in effective ness due to resistance build up in insects.
- Thus the only viable solutions for the future is IPM.
- The economics benefits and reduced social costs of these System present a logical answer to the post control problem.
- These products can be dangerous if not used properly.
- Parasite will help in selecting which pesticides to use.
- The developed method allows qualitative and quantitative
- Analysis of 427 pesticides in fruits and vegetables samples in UHPLC- QTOF-MS

REFERENCES

REFERENCES

Some direction are use that pesticides users must be obey are contained in documents That are only referred to on the product labelling.

These reference to other documents is a new practice it is necessary because there is no longer room in the traditional pesticide label to explain the requirement of all laws and regulations that may apply to the user for example EPA has adopted or is considering new requirements

☞ ground water protection

☞ pesticides transportation, storage and disposal worker protection

☞ Endangered species protection

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