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A Review of Current Knowledge Plant Protection Products Using IBM SPSS Statistics

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Abstract. *how are they on insects have a toxic effect depending on, we have plant protection products there are, they are related or while consuming or when inhaled works, to some are in many of these ways can be effected by long term toxicity, repeated intake as a result/interaction with the product occurs as a result of taking and so among consumers common. As long as possible due to period intoxication residue. The residue is toxicologically A significant amount of treatment later plant protection items are defined as non-toxic residues referred to as residuals. Metabolites as residues are considered, and plant the safety factor is corrosion or as reactants are produced by decomposition, there these are as described above have persistent toxic effects. Research significance: plant protection products kill and repel insects and can also be used to control are compounds. They are various and can be used for purposes for example, to harvest a crop before and after protection, growth of the plant promoting the cultivation of weeds termination or vegetation protection of goods may be intended. These products contain pyrethrin, azadirachtin, or nicotine and may be as natural as or synthetically such as ddt maybe. Of pesticides another characteristic is that once it is used duration of toxic effects depends. This is consistency referred to as continuous plant protection unlike products, "shock referred to as "products", immediately after they are used has an effect, but they don't last. Many for pest control if applications are needed, correct between treatments a to determine spacing product stability it is very important to be aware of. Methodology: SPSS statistics is a data management, advanced analytics, multivariate analytics, business intelligence, and criminal investigation developed by IBM for a statistical software package. A long time, spa inc. Was created by, IBM purchased it in 2009. The brand name for the most recent versions is IBM SPSS statistics. Evaluation parameters: Herbicides: used to control weeds, Insecticides: used to control insects, Fungicides: used to control fungal diseases, Molluscicides: used to control snails, Acaricides: used to control mites, Rodenticides: used to control harmful rodents, Growth regulators: used to control biological processes. Results: the Cronbach's Alpha Reliability result. The overall Cronbach's Alpha value for the model is .688 which indicates 68% reliability. From the literature review, the above 63% Cronbach's Alpha value model can be considered for analysis.*
Keywords: SPSS statistics, Plant protection products, Insecticides, Growth regulators.

1. INTRODUCTION

On the market in Germany today almost all plants that are safety products with restrictions of sorts are named. These buffer zones are mainly of the standard usage scenario and are set up, it's a reasonably bad one-represented status and in the accreditation process easy to handle. However, this approach in some situations has extra protection. Farmers these restrictions if not followed, 100.000 dm a penalty of up to since, buffer zones very different to set up making decision plans there is an urgent need. In Germany already in the accreditation process and introduced the new scheme will be described [1].Plant protection products and their remnants, for soil organisms of plant protection products behind the risk assessment a concept in science created by the current risk assessment scheme, new regulation structures, and science considering developments is being reviewed. Nutrition cycling, soil structure, pest control, and biodiversity in agricultural landscapes such as a related ecosystem as key drivers for services for existing soil organisms for specific security targets proposals are made. Terrain living above soil compared to the non-target ankle, of most organisms in soil time scales associated with diffusion and biological processes considering, also inside the soil environmental hazards outside assessments should be made the committee proposes that. Field-scale considering boundary conditions [2]. Efsa's plant protection products and their committee on residues (PPR). Guidance document commissioned for review. This guideline of the ppr panel was requested within this command first of three deliveries. It is tier 1 and higher tier detailed information on outcome evaluations sorted with guidance acute and chronic effect focuses on assessment programs [3]. Used to control insect plants from natural materials, bacterial strains, and some biomass from which minerals are derived natural pesticides plant protection products, low toxicity to humans pesticides due to some benefits for plant protection chemicals called alternative. Environment, harm release/leakage of resulting residues, and target insects, in general, are very specific. Moldova macroeconomics of Romania arbitrary of the region ne natural from plants for plant protection products special attention was paid to this a valuable secondary metabolite considered a resource of changes, especially plant essential in the form of oils, biologically effects and survival modes of insecticide action [4]. Environmentally safe spray techniques and plant protection use of products (PPPs). Created to reduce, for the environment minimizing losses only when required by using them. In this sense, plants' size according to characteristics of new technologies to adapt invested in creating the effort is well known. Lidar (light detection and ranging recorded using measurements, surface density, and height adjustment is

excellent crop structural parameters decided that its basic boom fruits there is a simple plan for spraying [5]. Common voles Microtus Corvallis in some European landscapes common small mammals. They are a part of European agriculture and could be a large rodents and they are plant protection in risk assessment for products a representative used common focal small herbivore is a mammal. In this thesis, common vole population dynamics, habitat and food preferences, insect capacity, and general volley a model small wild mammal in the ethnic risk assessment process is being reviewed. Common voles in many parts of Europe of agro-ecosystems in a component, primary loads of grassland habitats when the capacity to go is high second in agricultural areas level habitats live [6]. Vol population explosions while, in prime habitats the density of voles is high, it is like carved parts in secondary habitats the common vole population in of plant protection products on for possible adverse effects provides substantial buffering. Primary and secondary common voles in habitats a comparison for insects like different levels of risk addition, in primary habitat adequate population density, to ensure maintenance considered appropriate. It is common for vole populations for long-term harm protection to avoid consequences and help maintain a goal [7]. Plant protection products' performance depends on many factors it depends. Among them, the active amount of ingredients in the number of deposits, the number of deposits, and deposits on the leaf surface quantities are diseases for successful control are the most important elements. Short a large canopy over time like grapes that make up for crops, the dosage is usually suitable for vine growth stage or during the entire growing season a personal scale is used. These are economic and environmental effects, decreased performance, or greater risk of resistance along with plant protection excess of materials or may result in lower doses. [8]. European food safety commission of plant protection products and there to the committee on residues (ppr). Of plant protection products mechanism for risk assessment in the context of outcome models in good modeling practice to prepare a scientific opinion asked [9]. Plant protection products, ppps, fungicides, herbicides, and exposure to pesticides bees and other pollinators notable for inclusions stress, and this recent serious discussion and research is central. Specifically, dirty through pollen and nectar emergence is considered important, because it's all bee of ppp expression in species presents a high risk. However, many ppp residues are non-targeting which can cause living things the real danger is clear for real concentration difficult to assess due to lack of evidence [10]. Plant protection products (ppps) are a serious dilemma causing; their use against poverty and disease although contributing to the struggle, at the same time these agricultural chemicals are remarkably common and represent a health threat. Water framework directive (fwd) is one of Ireland's commitments in part, the country's groundwater sources and resources should be properly monitored, and specific groundwater quality standards must be met. Vulnerability assessment is the likelihood of an adverse event method of assessment, too this information is pollution prevention and for decision-making, purposes will be useful [11]. Synthetic chemical pesticides than active microorganisms plant protection products containing environment and wildlife less dangerous it is said. Nevertheless, their potential toxicity and due to pathogenicity, proper pre-marketing environmental protection assessment is needed. Regulation of such security for purposes of science in assessment and technical guidance is rare so, such to provide guidance, in an unacceptable environment a risk decision is also used to identify acceptable risks wood is proposed [12]. For plant protection products Aleppo on performance evaluation the main objective of the standards is to the registration of Aleppo member states within procedures, field tests how should it be conducted performance by describing harmonizing the evaluation process. Most recently, these standards 91/414 (EU, 1993) under the directive European by adoption within the union's registration process have acquired formal importance. In EU member states efficacy and phytotoxicity conducting tests, development, and implementing agencies officially by government bodies to be recognized includes demand. [13]. Currently in the European union agricultural operator exposure and improve risk assessment of new exposure data an agricultural operator for assessment of exposure a new predictive model has been created. New the operator expression model in EU member states (ms) current application techniques and procedures reflects plant protection of the national or the products for zone authentication, step-by-step plant supporting risk assessment in defense products (PPP) of active ingredients applies to approval [14]. Plant protection products and their remains group, for non-target arthropods of plant protection products development of risk assessment plan a science to support created the idea. Current risk assessment programs, latest workshops, and science consider progress is reviewed with food web support, insect control, and biodiversity such important environment securing the services specifically intended proposals are made for conservation goals. Recovery and source-sink population dynamics to address, terrain level risk assessment conducting is recommended [15].

2. MATERIALS & METHODS

Herbicides: used to control weeds: Also commonly known as herbicides are known herbicides are undesirable used to control plants the products are also known as weeds is called chosen herbicides are specific weeds control species, at the same time the desired crop relatively unscathed give up, non-selective herbicides sometimes in merchandise that is total herbicides are called wasteland, industrial and construction sites, railways, and railways can be used to destroy bandages. The plant interacts with meaning. Selected/unselected besides, in other important differences stability is residual action how much is the product called tense present and active there are, absorption mechanisms it is above the ground through the roots is absorbed only by the inner leaves, or in other ways, and how it works. Historically, common salt and other metals substances like salts are used as herbicides, however, these are gradually gone out of favor, and in some countries, these are in the soil due to persistence, toxicity, and groundwater is also banned due to pollution has been done. Herbicides also in war and conflicts have been used.

Insecticides: used to control insects: Pesticides kill insects materials used. They are respectively for insect eggs and larvae eggs used against killers and larvicides are included. Pesticides agriculture, medicine, industry, and used by consumers. 20th-century agricultural production pesticides behind the increase are said to be the main factor. Almost all pesticide ecosystems significantly can transform; many for humans and/or animals are toxic; some food is enriched as they propagate down the chain. Pesticides are two major can be classified systematically pesticides, residual or long-acting and non-residual function contact pesticides. How does an insecticide kill an insect kills or incapacitates the method of doing that describes? It is pesticides another way to categorize provides fish, birds, and unrelated like mammals and insecticides for organisms whether it is toxic methodology is important in understanding.

Fungicides: used to control fungal diseases: Fungicides are biocidal chemical compounds or parasitic fungi that kill their spores useful biological organism is mildew which stimulates growth. Fungi severe damage to agriculture can cause, as a result, yield, quality, and profitability critical loss occur. Agricultural fungicides and fungi in animals are used to fight infections. Non-fungal oomycetes used to control chemicals are fungicides also referred to as, because oomycetes are fungi that affect plants as well. Contact fungicides, translaminar or systemic may be. Contact fungicides not taken up in plant tissues and spray deposited protects the plant only. Translaminar fungicides top with fungicide, sprayed from the leaf surface down, redistribution to unsprayed surface are doing systemic fungi kills are taken out and xylem is redistributed by roles. A few fungicides are plant-based moving to all areas. Some are locally formal, some are moving upwards.

Molluscicides: used to control snails: Snail bait, snail pellets, or slug pellets for so-called mollusks are pesticides against, are generally agricultural, or used in horticulture, especially gastropod insects, especially for controlling snails and slugs crops or other valuable plants damaged by feeding. Metal salt-based molluscicides are non-toxic to higher animals. However, metaldehyde-based and especially acetylcholinesterase inhibitor-based products are highly toxic, and they are pets and cause many deaths in humans. Some products contain a bittering agent, which poses a risk of accidental poisoning reduced but does not eliminate. Acetylcholinesterase inhibitor atropine as an antidote to poison anticholinergic drugs such as can be used. To metaldehyde there is no antidote, treatment is symptomatic.

Acaricides: used to control mites: The maximum number of ticks that destroy their proliferation acaricides are used during the rainy season to stop it. A strategic therapy table is used, at the beginning of the rainy season method to stop their proliferation, again from the end of the rainy season surviving the treatment, in the rainy season remove breeding ticks. Chemical acaricides once a time with tick control were very popular and partially successful, but synthetic acaricides have disadvantages of using for human and animal consumption harm to meat and milk resulting in residual effects includes. Of acaricides, resistance to continuous use also results in the growth of tick strains.

Rodenticides: used to control harmful rodents: Rodents are rodents prepared for killing chemicals sold are commonly called "rat poison". Although mentioned, rats, squirrels, woodpeckers, chipmunks, porcupines, nutria, beavers, and voles rat killers to kill are used. In nature rodents play an important role despite their characters, they are timing to be controlled some rodenticides are dangerous after exposure to the method, while others are more than one is required. Rodents eat unknown food not like, and maybe they are adapted to the inability to vomit, model wanting and waiting, and be it for themselves or others does it cause disease in rats monitors that. Poisonous this phenomenon of shame is many only after doses rationale for killing poisons is dogs, cats, and for mammals including humans are directly toxic besides, many rodenticides are from rats that hunt dead bodies or to scavenging animals risk of secondary poisoning provide.

Growth regulators: used to control biological processes: Plant growth regulators (pgrs) to modify plant growth chemicals used are, i.e. Increasing branches, suppressing shoot growth, increasing re-blooming, removal of excess fruit or ripening of the fruit to change plant, tree malignancy and age, size, time, cultivation, and weather chemical by conditions how well is it absorbed several factors including page affect performance. Plant growth regulators can be divided into five categories auxins, gibberellins and of gibberellin biosynthesis inhibitors, cytokinins, abscisic acid, and ethylene compounds affecting condition-related compounds. Plant biosynthesis of hormones preventive products including apogee, and retain are available. Plant growth regulators, plant growth, reproductive development, maturity, and maturity or managing growth through aging for internal and external factors it's rate or mode of reaction or changing both it is used for crop rotation. Post-harvest preservation.

Methods: SPSS statistics is a data management, advanced analytics, multivariate analytics, business intelligence, and criminal investigation developed by IBM is a statistical software package. Long time, spa Inc. Was created by, IBM and purchased in 2009. The brand name for the most recent versions is IBM SPSS statistics. The "statistical package for the social sciences" (SPSS), a set of software tools for changing, analyzing, and displaying data, is commonly used. Multiple formats are available for SPSS. Numerous add-on modules may be purchased to increase the software's capability for data entry, statistics, or reporting. The main application is known as SPSS base. The most crucial of them for statistical analysis, in our opinion, are the SPSS advanced models and the add-on modules for the SPSS regression model. Additionally, independent programs that connect with SPSS are available from spas Inc. SPSS is available in versions for windows (98, 2000, me, nt, and XP), supported by windows 2000 running SPSS version 11.0.1. Although further versions of the SPSS will most likely be available by the time this book is released, we are certain that the SPSS instructions provided in each chapter will still apply to the studies outlined.

3. RESULT AND DISCUSSION

TABLE 1. Reliability Statistics

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.688	.639	7

Table 1 shows the Cronbach's Alpha Reliability result. The overall Cronbach's Alpha value for the model is .688 which indicates 68% reliability. From the literature review, the above 63% Cronbach's Alpha value model can be considered for analysis.

TABLE 2. Reliability Statistic individual

	Cronbach's Alpha if Item Deleted
Herbicides: used to control weeds	0.589
Insecticides: used to control insects	0.558
Fungicides: used to control fungal diseases	0.553
Molluscicides: used to control snails	0.598
Acaricides: used to control mites	0.697
Rodenticides: used to control harmful rodents	0.699
Growth regulators: used to control biological processes	0.778

Table 2 Shows the Reliability Statistic individual parameter Cronbach's Alpha Reliability Results Herbicides: used to control weeds 0.589, Insecticides: used to control insects 0.558, Fungicides: used to control fungal diseases 0.553, Molluscicides: used to control snails 0.598, Acaricides: used to control mites 0.697, Rodenticides: used to control harmful rodents 0.699, Growth regulators: used to control biological processes 0.778

TABLE 3. Descriptive Statistics

Descriptive Statistics													
	N	Range	Minimum	Maximum	Sum	Mean		Std. Deviation	Variance	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Herbicides: used to control weeds	96	4	1	5	294	3.06	.134	1.312	1.722	.082	.246	-1.102	.488
Insecticides: used to control insects	96	4	1	5	254	2.65	.137	1.345	1.810	.357	.246	-1.045	.488
Fungicides: used to control fungal diseases	96	4	1	5	281	2.93	.145	1.423	2.026	.288	.246	-1.247	.488
Molluscicides: used to control snails	96	4	1	5	294	3.06	.127	1.247	1.554	.379	.246	-.778	.488
Acaricides: used to control mites	96	4	1	5	293	3.05	.145	1.417	2.008	-.071	.246	-1.195	.488
Rodenticides: used to control harmful rodents	95	4	1	5	292	3.07	.106	1.034	1.069	.086	.247	-.725	.490
Growth regulators: used to control biological processes	95	4	1	5	307	3.23	.098	.950	.903	-.179	.247	-.047	.490
Valid N (listwise)	95												

Table 3 shows the descriptive statistics values for analysis N, range, minimum, maximum, mean, standard deviation, Variance, Skewness, Kurtosis. Herbicides: used to control weeds, Insecticides: used to control insects, Fungicides: used to control fungal diseases, Molluscicides: used to control snails, Acaricides: used to control mites, Rodenticides: used to control harmful rodents, Growth regulators: used to control biological processes this also using.

TABLE 4. Frequency Statistics

Statistics								
		Herbicides: used to control weeds	Insecticides: used to control insects	Fungicides: used to control fungal diseases	Molluscicides: used to control snails	Acaricides: used to control mites	Rodenticides: used to control harmful rodents	Growth regulators: used to control biological processes
N	Valid	96	96	96	96	96	95	95

	Missing	32	32	32	32	32	33	33
Median		3.00	2.00	3.00	3.00	3.00	3.00	3.00
Mode		3	2	2	3	3	3	3
Percentiles	25	2.00	1.25	2.00	2.00	2.00	2.00	3.00
	50	3.00	2.00	3.00	3.00	3.00	3.00	3.00
	75	4.00	4.00	4.00	3.00	4.00	4.00	4.00

Table 4 Shows the Frequency Statistics in Herbicides: used to control weeds, Insecticides: used to control insects, Fungicides: used to control fungal diseases, Molluscicides: used to control snails, Acaricides: used to control mites, Rodenticides: used to control harmful rodents, Growth regulators: used to control biological processes, curve values are given. Valid 96, Missing value 32, Median value 3.00, Mode value 3.

Histogram plot

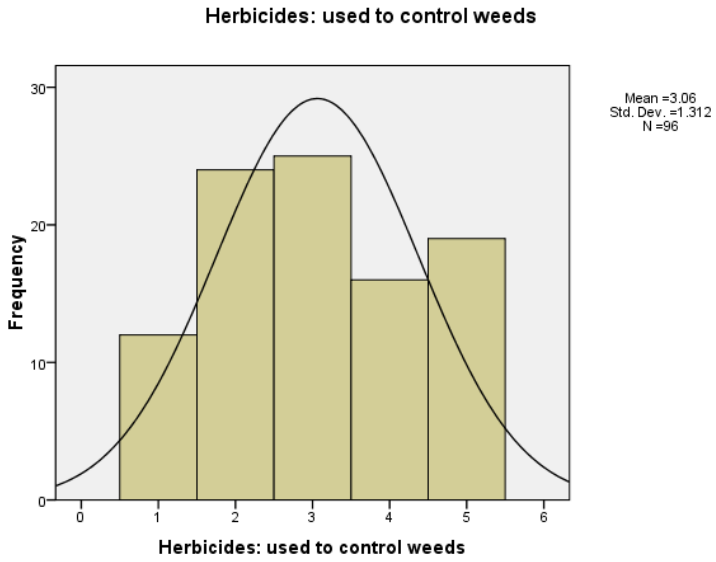

FIGURE 1. Herbicides: used to control weeds

Figure 1 shows the histogram plot for Herbicides: used to control weeds from the figure it is clearly seen that the data are slightly Left skewed due to more respondents choosing 3 for Herbicides: used to control weeds for the 2 value all other values are under the normal curve shows the model is significantly following a normal distribution.

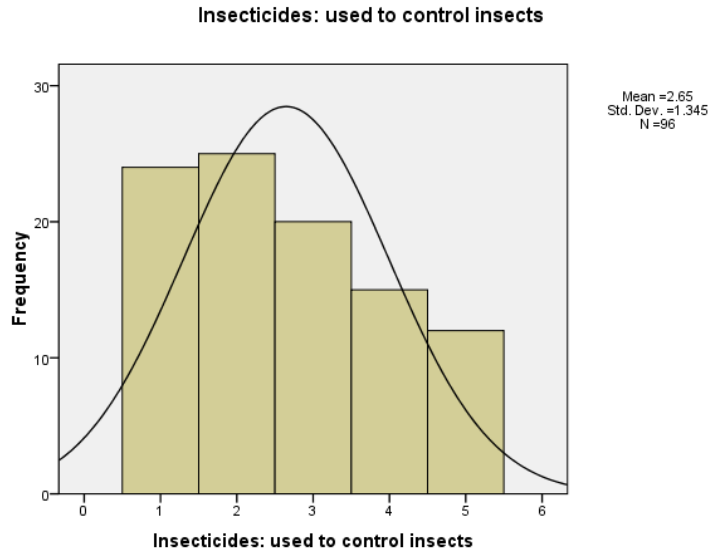

FIGURE 2. Insecticides: used to control insects

Figure 2 shows the histogram plot for Insecticides: used to control insects from the figure it is clearly seen that the data are slightly Left skewed due to more respondents choosing 3 for Insecticides: used to control insects except for the 2 value all other values are under the normal curve shows the model is significantly following a normal distribution.

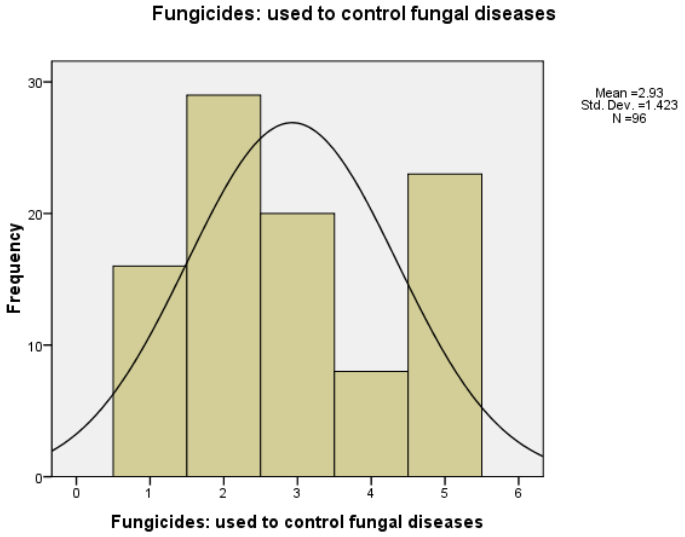

FIGURE 3. Fungicides: used to control fungal diseases

Figure 3 shows the histogram plot for Fungicides: used to control fungal diseases from the figure it is clearly seen that the data are slightly Left skewed due to more respondents choosing 2 for Fungicides: used to control fungal diseases except for the 2 value all other values are under the normal curve shows the model is significantly following a normal distribution.

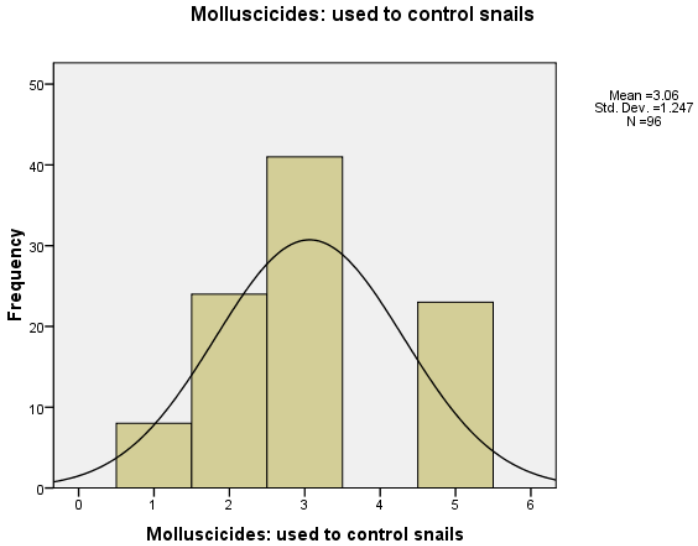

FIGURE 4. Molluscicides: used to control snails

Figure 4 shows the histogram plot for Molluscicides: used to control snails from the figure it is clearly seen that the data are slightly Bell Karo due to more respondents choosing 3 for Molluscicides: used to control snails except for the 1 value all other values are under the normal curve shows the model is significantly following a normal distribution.

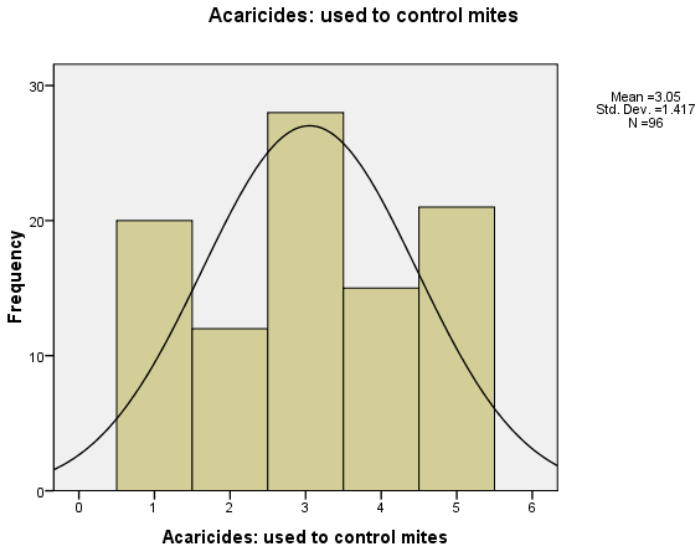

FIGURE 5. Acaricides: used to control mites

Figure 5 shows the histogram plot for Acaricides: used to control mites from the figure it is clearly seen that the data are slightly Left skewed due to more respondents choosing 3 for Acaricides: used to control mites except for the 2 value all other values are under the normal curve shows the model is significantly following a normal distribution.

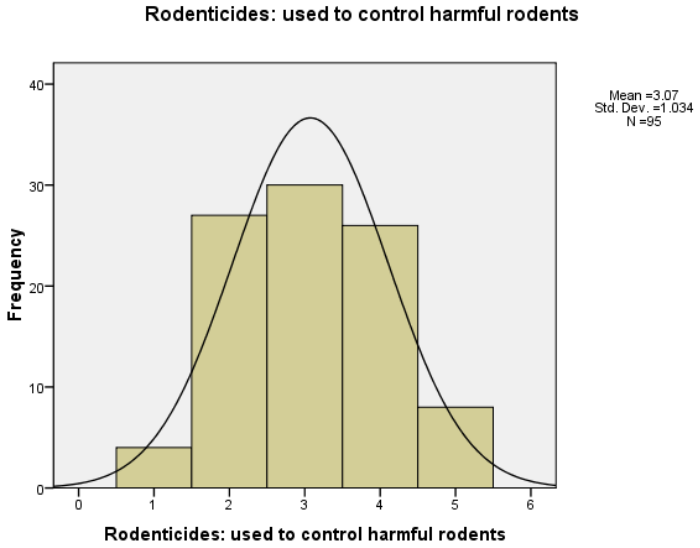

FIGURE 6. Rodenticides: used to control harmful rodents

Figure 6 shows the histogram plot for Rodenticides: used to control harmful rodents from the figure it is clearly seen that the data are slightly Left skewed due to more respondents choosing 3 for Rodenticides: used to control harmful rodents except for the 1 value all other values are under the normal curve shows the model is significantly following a normal distribution.

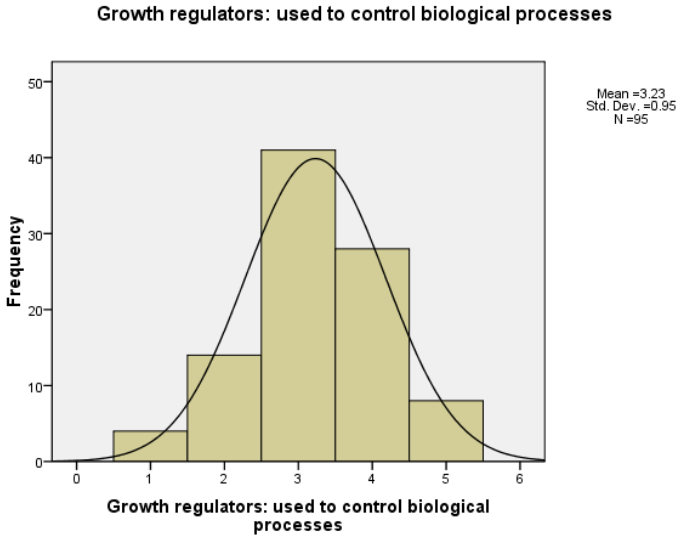

FIGURE 7. Growth regulators: used to control biological processes

Figure 7 shows the histogram plot for Growth regulators: used to control biological processes from the figure it is clearly seen that the data are slightly Left skewed due to more respondents choosing 3 for Growth regulators: used to control biological processes except for the 2 value all other values are under the normal curve shows the model is significantly following a normal distribution.

TABLE 5. Correlations

Correlations							
	Herbicides: used to control weeds	Insecticides: used to control insects	Fungicides: used to control fungal diseases	Molluscicides: used to control snails	Acaricides: used to control mites	Rodenticides: used to control harmful rodents	Growth regulators: used to control biological processes
Herbicides: used to control weeds	1	.597**	.634**	.435**	.281**	0.043	-0.08
Insecticides: used to control insects	.597**	1	.684**	.654**	.308**	0.148	-.268**
Fungicides: used to control fungal diseases	.634**	.684**	1	.596**	0.169	.364**	-.271**
Molluscicides: used to control snails	.435**	.654**	.596**	1	.296**	0.078	-.227*
Acaricides: used to control mites	.281**	.308**	0.169	.296**	1	0.013	-.291**
Rodenticides: used to control harmful rodents	0.043	0.148	.364**	0.078	0.013	1	0.047
Growth regulators: used to control biological processes	-0.08	-.268**	-.271**	-.227*	-.291**	0.047	1
**. Correlation is significant at the 0.01 level (2-tailed).							
*. Correlation is significant at the 0.05 level (2-tailed).							

Table 5 shows the correlation between motivation parameters for the herbicides: used to control weeds fungicides: used to control fungal diseases is having the highest correlation the growth regulators: used to control biological processes is having the lowest correlation. , next, the correlation between motivation parameters for insecticides: used to control insects for the fungicides: used to control fungal diseases is having the highest correlation with growth regulators: used to control biological processes the lowest correlation. Next, the correlation between motivation parameters for fungicides: used to

control fungal diseases the insecticides: used to control insects is having the highest correlation with growth regulators: used to control biological processes have the lowest correlation. Next, the correlation between motivation parameters for molluscicides: used to control snails for the insecticides: used to control insects is having the highest correlation with growth regulators: used to control biological processes having the lowest correlation. Next, the correlation between motivation parameters for acaricides: used to control mites for the molluscicides: used to control snails is having the highest correlation with growth regulators: used to control biological processes having the lowest correlation. Next, the correlation between motivation parameters for rodenticides: used to control harmful rodents the fungicides: used to control fungal diseases is having the highest correlation with acaricides: used to control mites having the lowest correlation. Next, the correlation between motivation parameters for growth regulators: used to control biological processes for the rodenticides: used to control harmful rodents is having the highest correlation with acaricides: used to control mites having the lowest correlation.

4. CONCLUSION

In some geographic regions of the world growing in numbers, food for the population ensuring requirements, in increasing the productivity of crops and from the action of certain insects they're in protecting them in agriculture due to stock nature as bio pesticides plant protection products incentive to use. In agriculture, the action of the insect on the crop during development and the post-harvest period of transport or storage manifest when this because, pesticides chemical plant protection productivity biology, organic chemistry, biochemistry, and the agricultural sector with some branches of science closely related. Chemical plant protection use of materials in agriculture leads to increased productivity, mainly for unwanted plants its effective action against pest removal. World provided by the institute of health according to the data, the year 1940 the first used chemical of plant protection products usage is increasing worldwide comes, especially in developed key to the following countries have objectives. However, chemical plants' intensity of security products application, continuous and non-biodegradable, often irrational, deep soil degradation processes, groundwater and surface water pollution, and air pollution for initiation and intensity contributed, as a result, flora and fauna are affected. Nearby areas. From this soil contamination of crops has been recorded, it is in the entire food chain especially food items impact on inequality caused so, new real agricultural development directions are imposed and dependence among insects and a new non-resistive highly efficient product thus creating applications number and these items reduce size and fauna protect and eco-friendly should be. In recent decades, to increase plant productivity and improve its capital international and national concerns are intensified. Plants many and complex crops industrialization, their protection and modern processing using methods are continuously evolving through a plant organism, basically chemical composition and functionality the functions are very complex. Today, plants produce terpene, steroids, anthocyanin's, anthraquinones, phenols, polyphenols, cosmetics products, pharmaceutical industries, and used food industries. Protective products were used, they must disappear as a result of their toxicity avoiding risks from the environment to ensure correct. After the use of degradation of plant defense production, the process is referred to as dispersion. Due to vegetative growth or mechanical and physical like rain external dispersion due to causes may occur. Hydrolysis, oxidation, and photosynthetic processes contribute to such degradation there are also chemical aspects, this is not an exhaustive list. Another way to decay is internal by reasons—that is, due to metabolism degradation processes that occur cause. In this case, applied plant protection is harmless depending on the product or toxic metabolites changes are produced. Produce consumer goods maximum residue limit (mrl) authorities determined and thus consumers exposed to the risk of toxicity they will not. This parameter is plant protection product harvest for use the time between doing attached to the 'protection period'. Lethal to assess toxicity dose 50 is the lt50 parameter used. This parameter, using the route of injection, 50% of tests performed leading to the death of organism's amount of active ingredient indicates. These tests are mice and laboratories such as rats made with animals. Within the ld50 parameter, the product acute oral ingestion ld50, the product applied to skin acute skin ld50 or preparation inhalation lethal concentration between 50 lc50 you can see the difference

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