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ASSESSMENT OF PARTICIPATORY COMMUNICATION ON UTILISATION OF AGROCHEMICALS: A CASE OF ASHAIMAN FARMERS

BERLINDA YETSA NUKPOR

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DECLARATION

Candidates' Declaration

I hereby declare that this dissertation is the result of my own original findings and that no part of it has been presented for another degree in this university or elsewhere.

Candidate's Signature ……. Date ……

Berlinda Yetsa Nukpor

MADC 19022

Supervisor's Declaration

I hereby declare that the preparation and presentation of this dissertation was supervised by me in accordance with the guidelines of supervision of dissertation laid down by the Ghana Institute of Journalism.

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Dr. Charles Asare Bamfo

ABSTRACT

Communication and participation are critical segments of the booming agricultural development of a country. The need for farmers to be enlightened more and positively in the application of various farming procedures through communication is indispensable. Different communication systems have little effect on the transformation of small scale farmers in rural zones due to elements such as low cooperation, unfocused programs and innovation. These developments are ineffectively perceived and applied by farmers because there is a barrier in communication channels. This study assesses participatory communication on agrochemicals among farmers in Ashaiman. The information gathered utilizes strategies such as perception, group discussions and interviews. This study analyzes data using cross-tabulations under descriptive statistics. The result shows that the usage of participatory communication is not as satisfying as needed for the smooth running of crop yields. The study looks at the current situation farmers face in agrochemicals utilization and seeks to improve the capacity of farmers by expanding the force of discourse between the farmers and stakeholders to enhance participation. The need for farmers to experience greater involvement from the local and district level of government to enable policies relating to agrochemicals to be more community-oriented, first hand experienced as well as open to aid them in practising good farming techniques in agrochemical application is vital. Various factors and gaps from the local level to national level must be filled entirely to enable the smooth running of communication strategies for individual farmers to bridge communication gaps between them and stakeholders to enhance better implementation and adaptation of agrochemical utilisation.

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DEDICATION

To my dear family, thank you for standing beside me with prayers, direction, support and guidance. Thank you for being there for me.

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LIST OF ABBREVIATIONS AND ACRONYMS

MDG1	-	Millennium Development Goal One
ComDev	-	Communication for Development
ASHMA	-	Ashaiman Municipal Assembly
FAO	-	Food and Agriculture Organization
SFDP	-	Small Farmers Development Programme
ADP-SP	-	Agriculture Development Program Support Project
IDAS	-	Irrigation Development Authority Scheme

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Participatory communication provides a mutual understanding for farmers and other stakeholders in agriculture to share information on issues relating to the use of agrochemicals. Participatory communication is the exchange of information between the parties involved in a process through dialogue to achieve mutual understanding and consensus for a decision-making process. The Food and Agricultural Organization set up the People's Involvement Program in 1980, using small groups of 15 like-minded farmers. The organization found that people's participation through small groups offers distinct advantages as economies of scale, higher productivity, reduced costs, and increased efficiency. This acts as an input for the FAO Small Farmers Development Programme (SFDP), which organized thousands of participatory groups in many Asian countries. The agriculture sector alone represents around 65 percent of the workforce, approximately 40 percent of the 100 percent of inaccessible fiscal standards.

Participatory communication approaches provide an effective mapping diffusion of local farmers' problems and issues, monitoring and coordination with stakeholders towards agriculture developmental goals, and identification of local developmental challenges and working on alternatives for farmers operating under irrigation schemes. Sharing ideas and vies provides suggestions for future farmers to implement better communication involvement strategies to improve the development of agriculture in an area. Considering the ever-increasing population in Ghana and substantial reliance on agriculture for food, there is the need to

properly engage farmers through various channels of communication to boost harvest, thus increasing yield. These are a full utilization of land and agrochemical use.

This has prompted the expansion and utilization of engineered agrochemicals rather than the natural, social, and mechanical technique for increasing crop yield, eschewing pest, weed and diseases from farm produce. Farmers are mostly not ready to reduce crop yields just for a few health hazards. It is, therefore necessary that stakeholders responsible for the regulation of fertilizer application by farmers engage them in dialogues for the better usage of these agrochemicals to save lives (Ngowi, 1995). The paper gives a quick and recognizable instrument that can dissect the collective energy between participatory communication among actors and non-participants and the utilization of agrochemicals focusing on a farm located in Ashaiman. Specifically creating and applying the subjective parts of a participatory procedure that better allows for a more extensive framework related to the application of agrochemicals on farms in Ashaiman.

The administration of Ghana in the mid-1960s built a dam in Ashaiman, a rapidly growing city in the Greater Accra Region of Ghana. The dam is under the jurisdiction of the Ashaiman Municipal Assembly (ASHMA) and also under the management of the Ministry of Food and Agriculture (MOFA). The barrier used for growing crops has since then helped farmers in Ashaiman and its environs in the cultivation of different yields, particularly vegetables and rice for the urban market. It is in this vein that significant measures have been put in place for the utilization of agrochemicals among the farmers to continually examine surveys that

form a potential contribution of partners in the dynamic procedure related to their utilization and improvement of these chemicals. This paper recognizes how participatory communication influences farmers on the application of agrochemicals in their methods and process of farming.

1.2 Statement of the Problem

Projects and programs in developing nations have overlooked the inclusion of farmers in the decision-making process. These projects therefore have achieved low support and experienced communication challenges during their time frame thus crippling farmer's ability to better utilize appropriate methods of applying agrochemicals. It obviously portrays the fact that support is advantageous and also fundamental for improvement. For a long time, the significance of participatory communication among individuals to achieve global networks has been promoted by many scholars, but directives and goals have not been achieved in this regard. Browne (2011) contended that involving individuals in discourse is becoming the focal issue within a recent school of thoughts and scholars (Browne, 2011; Oakley, 1991).

Farming in Ghana is an occupation engaged in by most citizens. Some for sustenance farming where crops are used for immediate needs and others for commercial purposes. The labelling and education on the usage of such chemicals will go a long way to help the country. The right use of agricultural chemicals on crops is beneficial to farmers. The proper usage of such chemicals brings about high yields and prevents farmers from losses that can be incurred due to stunted growth of crops from the wrong use of such chemicals. Also the health effects that can be derived from mishandling such products and what the overdose can cause to crops

among others. Hence if the application of agrochemicals is wrongly done, yields will be reduced, leading to low bumper harvests which in turn leads to low standards of living. This can cause a strain on the economy not forgetting that the agriculture system is currently the backbone of the economy. Crops are exported for foreign exchange which is used by government for developmental projects to propel the country forward.

Farmers in Ashaiman argue that there is a communication gap between them and stakeholders in using agrochemicals on their farms. Participatory communication provides an enabling environment for the necessities and needs of the individual farmers to be considered. These establishing projects are more adjusted to the local farmer's conditions and give a more precise image of the assets of the local individual farmers in cultivating. The degree of participatory correspondence usage in the strengthening of small scale farmers has been low. Farmers not involved in participatory communication on the usage of agrochemicals end up using these products based on socialization and subjective referrals instead of the right method they can be enlightened on by extension officers and stakeholders. There is the need to improve the use of participatory correspondence methodologies in engaging small scale farmers on the best possible use of agrochemicals in their farming activities.

However, there are factors that influence a farmer’s decision on the use of a product. The question of what determines the type of agrochemicals. It could be the size of the farm owned, the accessibility of the said product that is the supply and purchase chain and also the knowledge gap of farmers. Nonetheless, new innovation projects and attitudinal changes should be encouraged in order to

heighten farmers awareness so they are encouraged in the correct application of agrochemicals. All the above boils down to communication and involvement of farmers.

1.3 Justification for the Research

Communication and dialogue are the foremost essential elements under any given circumstance. Most current agrochemicals manuals inform farmers about the quantity to apply to a particular yield, typically communicated in kilograms per hectare. The usage of agrochemicals does not assist farmers with choosing which of their harvests would profit most from a specific type of agro chemical, nor do they reflect current information and yield costs. They do not also take into consideration the educational and language barriers of most farmers hence the dire need for the exchange of ideas through participatory communication among farmers themselves as well as stakeholders. There is a need for farmers to be engaged in a communication process to utilize agricultural chemicals such as pesticides and fertilizers.

A ton of these farming chemicals is used as tests in numerous regions and social orders in Ghana and the world. This clarifies why innumerable farmers battle to cling to arrangements and projects established by administrative and government agencies. The impacts of unpredictable agriculture chemical usage have led to the need for management of agricultural activities focusing on the desire to improve the lives of individuals. The aim includes the concentration on advancing and significantly expanding farming profitability so the nation can accomplish food independence just as encouraged by the Millennium Development Goal One (MDG1), which targets minimizing neediness and yearning(Peprah, Amoah, &

Achana, 2015; Sachs, 2012). The paper further occupies a significant examination between participatory geographic data administrations and the impact of agricultural chemicals among farmers and stakeholders in the Ashaiman district and the environment.

While numerous farmers require adequate information about the hazards coupled with management and use of agrochemicals being fertilizers and pesticides, several hearsays discussed the effects of fertilizers and pesticides on the surroundings and the health of farmers (Ntow, Gijzen, Kelderman, & Drechsel, 2006).

1.4 Research Objectives

The purpose of the research is to discover answers to questions through the application of knowledge base procedures. The main aim of the study is to find out the issues surrounding farmers' engagement in decisions related to agrochemical applications in Ashaiman. The following research objectives were established:

a) To examine how farmers are dialogically involved in the usage of agrochemicals in Ashaiman.
b) To identify the farmer's perceptions on the role of participatory communication on the use of agrochemicals.
c) To assess the challenges of participatory communication for agrochemical applications in Ashaiman.
d) To provide recommendations on communication strategies that can enhance the implementation of agrochemicals in Ashaiman.

1.5 Research Questions

The researcher established the following research questions:

a) What extent have farmers been engaged dialogically in applying agrochemicals on farmlands in Ashaiman?

b) What are the perceptions of farmers on the role of participatory communication on the use of agrochemicals in Ashaiman?

c) What are some of the challenges faced by farmers concerning the effective use of participatory communication in the application process?

d) What are the efficient communication strategies that can enhance the implementation of agrochemicals in Ashaiman?

1.6 Organization of the Study

This study consists of five (5) chapters mainly. The first chapter of the study furnishes readers with an introduction, background of the research, problem statement, the justification of the study and the scope which the researcher seeks to cover. Chapter 2 presents the review of related literature on the synergy between participatory communication among farmers in Ashaiman, a theoretical framework to establish an analogy between variables being discussed in the study. This section provides an empirical review from numerous scholars and articles on the synergy between participatory communication gaps and agrochemical application by farmers in different sites and countries. Chapter 2 also explains some definitions of the concepts under the study, provides insights on the relationship between farmers, as well as lessons learned and their involvement in the decision making process on the use of agrochemicals.

Chapter 3 enumerates the research methodology, research design, research approach, and the method of choosing the sample out of a total population, the plan the researcher used in the data collection process, executed by the researcher in obtaining results, the instruments used in the data analysis process, the method and tools used for the data analysis and the profile of the understudied organizations. The fourth chapter consists of the analysis of the data collected and demographics of respondents, as obtained from the study. The final section, which is chapter 5, summarizes concludes and makes proposals for advanced studies.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The point of reference of this section is to scrutinize existing writings known with the enquiry and draw out its importance to the whole investigation. This phase analyses the empirical writings and surveys that portrays what has been done and approved by various articles and journals. This section brings to view significant writings on the impact of participatory communication on the use of agrochemicals by farmers at the catchment of Ashaiman. Consequently, enlightened more on the subtleties of other studies, the chapter covers the overview of the meanings of ideas of participatory communication and its influence on farmers' use of agricultural chemicals.

2.2 Theoretical Underpinnings to the Study

2.2.1 Diffusion of Innovation Theory

This study is going to utilize one of the modernization hypotheses, the Diffusion of Innovation theory. Everett Rogers, in his book Diffusion of Innovation (1983), characterized communication as the procedure by which a message is conveyed through specific channels after some time among the individuals from a social framework. This viability is in both conveying the message by conceivers of the thought, for example, the individuals who built up the Agriculture Development Program Support Project (ADP-SP) to those familiar to embrace the review, for instance, farmers. The hypothesis likewise addresses issues of the time as far as how long it has taken for a plan to be embraced. This investigation tries to set up

the period it took for ranchers in Malawi to acknowledge protection horticulture as a suitable innovation in their homesteads (Moseley, 2004).

Mefalopulos (2008) also stresses the significance of the individuals' interest in any task improvement cycle. He examines that the cooperation worldview accentuates that it is necessary and cannot happen without communication and feedbacks with fellow stakeholders. Unfortunately, such many advancement programs, including network-driven ones, appear to ignore this perspective. While focusing on investment, it does not give comparative consideration to correspondence, expected as the expert utilization of dialogic techniques to advance change. The need to effect change and show importance; investment should be founded to utilize certifiable two-way communication standards and practices. That is why participatory communication is progressively viewed as essential in encouraging partners' commitment to issue examination and goal. Advancement correspondence has progressively pushed toward an even double-sided model, which favors individuals' emotional and direct connection through interviews and discourse (Mefalopulos, 2008).

2.2.2 Theory of Communicative Action

Herbamas (1991) in his book ‘communicative action” said that the ideal circumstance of exchanging ideas among individuals is described by dialogue depending on the shared understanding, mutual equivalent, expressions of emotions and perspectives that apply on communication premises. The utilization of participatory communication in farmer’s decision making programs are geared toward guaranteeing that farmers are beneficiaries and have more significant control over choices that influence them. The significance of this theory explains

the motivation behind mutual understanding and the understanding of communicative strategies associated with legitimacy and social request. It is essential to note that Herbamus theory has the idea that communication among individuals and groups focuses on shared knowledge just as proper communication channels and strategies depend on an associations' or groups' decision to arrive at a consensus.

Herbamus explains that the purpose of communication is to reach an understanding through dialogue and language to solve societal problems. The structure of dialogue which Herbamus distinguishes as the non attendance of coercive power are the mutual understanding convincing intensity of a better decision making strategy for individuals and groups to make decision conceivable. (Herbamus, Honneth & Joas, 1991) The application of participatory communication in the farmer decision-making process aims to ensure that farmers are not just passive program recipients but have greater control and power over decisions affecting them.

2.3 Conceptual Underpinnings of the Study

Definitions

Agricultural chemicals are pesticides, herbicides, or manures utilized in farming activities to boost productivity. Simple minor differentiation in agrochemicals has been used for centuries to improve crop yields and control agricultural pests and diseases.

Communication

Communication is a social cycle that goes past the utilization of media. It contributes to the sharing of information and data. It also deals with accomplishing cooperation through mutual understanding among stakeholders. The participatory communication procedure generally expresses a plan which recognizes and portrays all the fundamental components needed by farmers to implement a program. The primary stage in setting up the structure requires knowing the partners' information level, perspectives, and practices to distinguish the various parts and approaches of mediation. A few studies have attempted to sum up the standards for such a communication model. A survey by a Latin American researcher Juan Somavia (1977, 1981) summarizes the role of involving stakeholders in the decision making process under an irrigation scheme in a local area as:

Communication is a human need: The fulfillment of the requirement for correspondence is similarly significant for society as the worry for well-being, sustenance, lodging, training, and work. Along with the various social needs, correspondence must empower the residents to free themselves. The options to be educated, and impart, are, therefore, fundamental human rights and these both independently and all things considered.

Communication is a designated human right: inside its own social, political, financial, and recorded setting, every general public must have the option to characterize autonomously the solid structure where it needs to compose its social correspondence process. Since there is an assortment of societies, there can, in this way, additionally emerge from different authoritative structures. Be that as it may,

whatever the system wherein the social correspondence work is typified, need must be given to the standards of support and availability.

Communication is a feature of the cultural conscientization, liberation, and freedom process. The social obligation of the media during the time spent on social change is exceptionally huge. In reality, after the time of formal training, the media is the most significant instructive and socialization operators. They are fit for illuminating or deceiving, uncovering or covering significant realities, deciphering occasions decidedly or contrarily, etc.

The correspondence task includes rights and duties/commitments. Since the media, in certainty, offers available assistance, they should do it in a structure of social and juridical responsibility that mirrors the social agreement of the general public. There are no rights without commitment(Somavia, 1977; Somavía, 1981).

The opportunity and option to convey, along these lines, must be drawn nearer from a triple point of view: first, general society needs to take an interest successfully in the correspondence field; furthermore, there is the structure of a system where this can occur; and, thirdly, the media must appreciate proficient self-rule, liberated from monetary, political or whatever. Participation is an essential operational standard for improvement of projects and activities and also a key common liberty which accommodates all people to be given an equivalent chance to impact and influence policy plan and execution (Jones, 2009). The influenced groups by the decisions of authorities brings the danger that when administrations are given, they do not coordinate the requirements and needs of the individuals, it is also excessively expensive and the cost recuperation and installment choices are ridiculous (Dervis, 2009).

Participatory communication focuses on the significance of the social personality of local networks, democratization and support at all levels; global, national, community and individual levels. Consequently, the improvement of a participatory correspondence model needs to occur connected with a sizeable cultural liberation at the national and worldwide levels.

2.4 Empirical Review

Research conducted in Bangladesh by Muhibull, Momotaz, and Chowdhury (2005) examined the impacts of agrochemicals pollution levels in water and soil on human health and the society at large. The study observed with a questionnaire survey on a union in a district in Bangladesh found that the pollution of water and soils resulted from agrochemicals contamination on the water surfaces. Muhibullah observed that human health was generally affected by the application of agrochemicals around the adopted area of study. Farmers were the most affected persons in the area since they were the primary users of the chemicals. The article argued that fertilizers as; ZIinc-oxy sulfate and some pesticides a; DDTs are the most dangerous agrochemicals in developed countries (Muhibbullah, Momotaz, & Chowdhury, 2005)

From the viewpoint of Evans (2007) in evaluating the degree of interest on the nearby individuals, distinguished three issues; who partakes, what exercises individuals partake in and for what reason the individuals take part are the major questions to investigate (Evans, 2007). Imani Satriani (2011) breaks down the application of participatory communication in the Family Strengthening Program in Bogor, Indonesia. By utilizing subjective examination and constructivist worldview, it discovered that participatory communication applied to the Program

of Family Empowerment Post covers similar admittance to take an interest in the stages of the program, communication among individual members were minimal as compared to the discourse between members in the field of wellbeing, economy and condition (Satriani & Muljono). As indicated by an article on communication for advancement composed by the Food and Agriculture Organization (FAO), Communication for Development (ComDev) is characterized as a social procedure.

This procedure however is dependent on exchanging and utilizing a broad scope of devices and strategies. Communication for development is tied in with looking for change at changed levels, including tuning in, setting up the trust, sharing information and abilities, building arrangements, discussing and learning for continued and significant support. The Communication for Development procedure goes past data scattering to encourage emotional investment and partner discourse. It features the significance of bringing issues to light, the social elements of improvement, neighborhood information, experiential learning, data sharing, and the emotional investment of rustic individuals and different partners in dynamic (Smith & Steduto, 2012). In a similar vein, (Khan 2006, Scott, 2012) see that participatory communication, responsiveness and responsibility are interrelated and interconnected (S. Khan, 2012; S. U. Khan, 2006) .

Mattah and Mattah (2015) posited in their study among 120 farmers within the catchment of a small urban irrigation scheme in the Greater Accra Region. The paper adopted an interview with focus group discussions where farmers were selected, and further data was collected to augment that of the survey. The study found that there were various types of chemicals in use in the adopted study area. The study showed, among others, that there are three significant places farmers at

the catchment receive colleague farmers. Mattah found out more than 50% of farmers in the adopted area buy the pesticides from agrochemical shops. The study argued that the frequency at which farmers may choose to apply these agrochemicals was predisposed by the affordability and size of the farm. The study recommended that the training of farmers on pesticide usage and discarding methods are of equivalent apprehension since these agrochemicals can affect society. (Mattah, & Futagbi, 2015).

Aliyu (2015) conducted a field survey and laboratory analysis to decide the ramifications of agrochemical substances on Lake Chad. The study agreed that social orders utilized conventional cultivating techniques, including restricted groundwater withdrawal with water system; however, an antiquated practice, it influenced just little pieces of the world. Water in Lake Chad is confronting genuine ecological issues from drag out dry spell to desertification, contamination, and biodiversity decrease. The paper found that the utilization of water for broad horticulture by the lakes is diminishing. Water quality is another significant issue in Lake Chad, particularly where the precipitation being the expected contribution to the framework is little, more danger of manure, pesticides, and other agrochemicals to the lake. The researchers argued that the adverse effects of the examination were demonstrated.

Specifically, P.H., Cadmium, Iron, Magnesium, and chlorine have contaminant levels over as far as possible as significant wellsprings of contamination in the lake are future issues. Unfortunately, the unfavorable impact of the agrochemical spillover in the Chad water at Kirinowa may be finished from the consequences of this investigation. The lake is under the contamination of

metals from farming tasks because of the irresponsible utilization of pesticides, herbicides and composts. Research on participatory approaches in disseminating agricultural knowledge to farmers by Barakabite, Sangna, and Aloyce (2017) shows how aggregate gatherings of farmers can be engaged through the inclusion of various partners in participatory activity research. The paper likewise talks about how participatory activity will help the cultivating network in receiving answers for farming.

This will contribute to taking care of issues just as helping in recognizing innovative and rural necessities. In this examination, an aggregate of 64 scientists and augmentation laborers and 320 provincial farmers were surveyed. Essential information was gathered utilizing self-directed surveys and meetings. The outcomes show that numerous communication channels for agribusiness are not received by farmers and different partners in different agricultural chains. An investigation by Ahwoi (2017) additionally shows that participation is accepted to have certain preferences, for example, improvement in project designs, having felt needs well on the way to be better off. Participatory communication must start at the most reduced level, and there must be genuine open doors for target groups for cooperation and choices which must identify with group needs and future productivity (Ahwoi, 2017)

As indicated by Mefalopulos (2020), the cooperation worldview underlines that substantial interest cannot happen without participatory communication. Lamentably, such a large number of advancement programs, including network-driven ones, appear to ignore this viewpoint and, while focusing on interest, does not give equal consideration to. Mefalopulos assumes that farmers and stakeholders

under the irrigation scheme develop communication for questions and answers. That is why written communication is progressively viewed as fundamental in encouraging partners' commitment to issue investigation and goal. Advancements in communication have progressively pushed toward an even model, which favors individuals' dynamic and direct cooperation through counsel and exchange (Mefalopulos, 2020).

Additionally, the outcomes from the study demonstrate that participatory activity research approaches, for example, Participatory Communication, Participatory Learning, and Action Research, Farmer Participatory Research, significantly affect the possible utilization of communication in the agricultural cultivating network. Among these participatory methodologies, few communication channels are demonstrated to be progressively viable due to accessibility and intuitive portable learning conditions that energize duties and support participatory mentalities among farmers and specialists. This investigation projects that Information Communication Technologies have a prevailing situation to ease country neediness and reinforce agriculture efficiency through participatory communication strategies. The study suggested that a substantial duty of all stakeholders in agribusiness and a link to communication chains can work together to solve societies numerous fits of hunger.

The uses of participatory approaches have been witnessed to help mutual learning between farmers and other actors in different agriculture value chains (Barakabitze, Fue, & Sanga, 2017). My concept of participation is the creation of room for combination of two or more ideas from different individuals, what they perceive, think and how they are able to act on the said perception.

2.5 Review and Critique of Previous Studies

Various literature and scholars have identified the negative and positive impact of agrochemicals on human health. Mattah, Mattah, and Futagbi (2015) identified the frequency of applying these agrochemicals was predisposed by the affordability and size of the farm, among others. The study recommended that the training of farmers on pesticide usage and discarding methods are of equivalent apprehension since these agrochemicals can affect society. Another survey by Barakabitze, Feu, and Sangna (2017) shows how aggregate gatherings of farmers can be engaged by including various partners in participatory activity research through Information Communication Technology-based systems. The challenge of this paper is that not all farmers are literates, and thereby the increased cost of undertaking theses technology systems is a problem for stakeholders.

The first study by Mattah, Mattah and Futaabi (2015) however did not consider the involvement of farmers in the communication process towards the use and application of these harmful agrochemicals. It only looked at the training of farmers without acknowledging the fact that farmers may have opinions concerning the usage of agrochemicals to voice out. It failed to see the fact that farmers do not only need training but need to be part of the process to be able to internalize such practices. The second survey by (Barakabitze, Feu and Sangna, 2017) also did not observe that a percentage of rural farmers are not literates hence the difficulty in assessing and using Information based Communication Technology (ICT). Both authors have taken a close look at the need to train farmers and also the need to make available participatory activities through Information Communication Technology.

I agree to an extent but both authors have completely ignored a major aspect of participatory communication, first is the direct involvement of farmers in the participatory process through direct exchange of opinions and perceptions on agrochemical utilization. On the other hand, a sense of belonginess and ownership to a perception, which will in turn drive the farmers to properly apply agrochemicals to their crops. The significance of this paper then is to create a straightforward procedure that can almost and certainly dissect the need for participatory communication between stakeholders and farmers on the use of agrochemicals on farmlands focusing on farmers under the Ashaiman Irrigation Site. This study will explicitly make and apply the abstract pieces of a participatory method that better records for a broader structure related to the utilization of agrochemicals on farmlands. Major studies only focused on the impact of agrochemicals on individual health and environmental pollution.

This study went a step further by focusing on the role participatory communication plays among actors and non-participants about the usage and application of these agrochemicals in environs situated around the farm in Ashaiman by examine how well farmers are allowed to voice out opinions and receive adequate feedback in alignment with the opinions exchanged through dialogue. This study will adopt the use of training farmers as stated by Mattah, Futaabi (2015) but will do so through the extensive and primary application of participatory communication to enable farmers better their methods of utilizing agrochemicals.

2.6 Lessons Learnt

The above literature discussed the perspective that best explains existing arrangements of participation communication within the specific case amongst farmers and stakeholders. The argument is that situational realities on the ground within farming communities are much worse than international aggregated statistics suggest. From the conversation on participatory communication two important key lessons are learned. To begin with, there are various measures taken while applying the term participation. What is more, participation ought to consistently be qualified by exceptional involvement and capacity. Therefore, the authors argue in favour of assessing the level of involvement of farmers in the decision-making process concerning chemical and fertilizer applications. Recommendations are made so farmers can have greater participation from local and district level government so that policies relating to agrochemical usage can be more community oriented.

Also, changes in the structure of communication must take place to pave the way for individual farmers to bridge communication gaps with stakeholders. As it argued, there are enough grounds to focus on the farmers' model of analysis, given the inappropriateness of other theories concerning participatory communication. It has shown that within the context of the Ghanaian environment where the central government and bureaucratic elites essentially 'are the chief heads of everything,' there are issues of biases when dealing with community involvement. Accordingly, there is a disconnect between policy intentions and the tangible realization of policies on farmers participating in decisions relating to agriculture. This paper seeks to fill this type of policy failure by offering plausible paths derived from the actors under the agricultural sector.

It is hoped that out of the foundations set by this research project, future research concentration and policy prescriptions can be more oriented at the national level so that farmers and farming communities can be directly involved in the management and administration of agrochemicals.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

This chapter presents the investigation approach. It gives data concerning the strategy that was utilized as an assurance for the utilization of this method. The chapter portrays the different times of the examination, the confirmation of people, the information assortment process, and the philosophy of information assessment. It also assesses the activity of matters in a quantitative examination identifying with the strategy for thinking lucidness. The chapter closes with a conversation of the moral thought applied to the assessment. A methodology is an approach that aids a researcher on how an investigation may be conducted. It can be comprehended as a study of concentrating on how research is carried out experimentally.

3.2 Research Design

The research design is a blueprint that contains the details of the methods and procedures used for data collection and analysis (Bell, Bryman, & Harley, 2018). Draper (2004) and Malhotra et al (2010) have noted that the three major research designs are exploratory research (which focuses on qualitative data), causal research and descriptive research (both of which focuses on collection of quantitative data (Draper, 2004; Malhotra, Birks, & Wills, 2010). As said by Yin (2013), a research design is a series of reasons that helps to link data to be used in studying a proposed research question in order to conclude. To draw out the views and opinions on the central thematic areas of the study, interviews were conducted

using semi-structured questionnaires designed by the researcher. This technique and design allowed the efficient gathering of information with ease from a relatively small number of farmers within the geographical location set by the researcher.

This technique used in the survey was less expensive, and further do away with observer judgment, using the questionnaire, increased the normalization of questions and measurements (Yin, 2013).

3.3 Data Collection Method

Interview

In the personal interviews the researcher conducted a face to face dialogue with a person or persons (interviewee). The questions were structured. Data was collected through face to face interview approach. The reasons for choosing face-to-face survey instead of online survey are as follows. Interviews were done for the reasons in line with the explanations done by (Ćwiklicki & Urbaniak, 2018) . Crowther and Lancaster (2012) state that interview is a face-to-face questioning technique, which aims to collect information from the respondents. They further indicate the advantages of interviews; the face-to-face questioning technique in particular allows the researcher to provide feedback to respondents immediately upon collecting the data. This, in turn, will enable the researcher to check the validity and relevance of data as it is collected (Crowther & Lancaster, 2012).

The researcher used this interview method in order to collect the information from the respondents in full depth. The interview method has been used by the researcher with the hope of supplementing data collected from using other methods. Furthermore, an interview also enables respondents to have more room to answer

their answers with close-ended question. It also stimulates more information and clarification on follow-up questions.

Questionnaire

The method is popular especially in case of big enquiries; it is highly adopted by private individuals, researchers, public and private organizations and even governments. In this method, questions are administered to respondents through face-to-face questioning approach, through posts or e-mails, through online survey with requirement of responding and sending back to the source (Gillham, 2008). A qualitative approach was picked as the technique since this method strengthens understanding and rendering of significance just as goals of fundamental human cooperation. A subjective way to deal with research concerns the abstract evaluation of mentalities, assessments, and practices. Additionally, a qualitative examination is all-encompassing; it takes a significant look at the bigger picture and starts with a quest for comprehension of the entirety. It likewise joins space for a depiction of the analyst's predispositions and ideological inclinations.

All these are clarified finally in parts that follow (Kothari, 2004). The researcher visited the site and administered a semi-structured questionnaire to farmers available on their farms. The distance of the farms was approximately 100 meters apart. This method gave the researcher ample time to collect data for one week. Essential information was created through critical witness study surveys and meetings with the assemblyman, the chairperson of the farmers' affiliation wing and farmers. A semi-structured survey was administered to 60 members who are farmers at the catchment. The surveys and interviews were administered to participants. These were led in English, even though there were times when members would utilize their home language, either Ewe or Twi, to communicate.

Although the language of members largely is not English, their order of the language is acceptable.

Be that as it may, in occurrences where the participants communicated in a language other than English, data was interpreted during the record stage. The researcher figured it essential to have all the survey materials in English to ensure that the information would be open to all individuals under the irrigation scheme.

3.4 Population, Sample Size, and Technique

A target population is the group of interest that the researcher hopes to understand, and that meets a particular predetermined criterion. In contrast, a portion of the people selected for the research is referred to as the sample population (Skovdal & Cornish, 2015). Generally, the techniques of focus group interviews, projective techniques, and in-depth interviews were used. The target populations for this study are vital informants who are farmers at the environs of Ashaiman. The survey questionnaires were issued to 60 farmers located on the farm and interviews were conducted with the farmers in three focus groups. This study was born in the catchment of the Northern and southern parts of Ashaiman, namely Zenu and Lebanon. A preliminary interview guide was pretested among ten respondents from Klagon who are farmers.

3.5 Data Analysis

Research data from fields are usually meaningless until they are analyzed and interpreted for easy understanding. This section of the study has been dealing mainly with how the whole research data was managed and this includes the activities that were transpired on the field through the analysis stage to the final presentation of research conclusion. A paper by Panneerselvam (2010) argues that

once field work and data compilation were finished, proper tools and technique should be used for categorization and scrutiny (Panneerselvam, 2011). The data collected from interviews conducted was edited to check spelling, grammatical errors, and consistency of responses as well as validity of answers before coding. The Nvivo version 10 was used in capturing, cleaning, and analyzing the data. All charts and tables were drawn using Microsoft excel 2007.

Using content analysis techniques, various themes that espoused the views of farmers were derived from the questionnaires obtained. Questionnaires received were rectified to address credible mistakes and to sift through mistaken judgments and errors to vouch the validity of the study. The results of the pre-tests were used in developing the final semi-structured interview guide used to gather information from the farmers. The manual contained questions to determine the respondents' level of participation in communication proceedings using agrochemicals on their farms and farmers view on the role of participatory communication on the utilization of agrochemicals for farming. A three focus group discussion was conducted to disseminate the results of the study. The group was composed of two chief farmers and twelve representatives of the farmers.

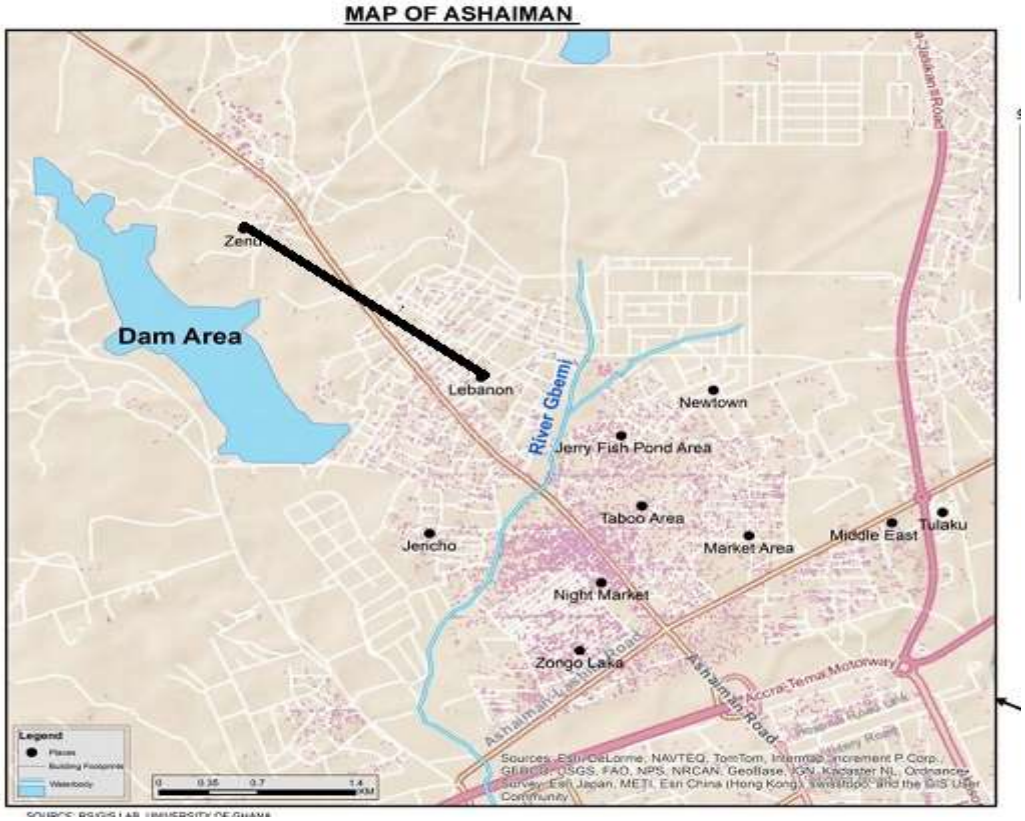
3.6 Profile of Ashaiman

The researcher concentrated on networks found inside the catchment of the Dzorwulu stream, which was dammed into the irrigation dam. The case of the Ashaiman Municipal Assembly (ASHMA) in Ghana, waste water irrigation and the use of agrochemicals are not merely fashioned by the need to manufacture more vegetables for an emergent market. Moderately, these practices are coupled to the municipality's shared history and Ghana's economic reformation understanding

more generally. Whereas this is a primary political environmentalism argument, it nevertheless stresses that the existing predicament confronting Ghanaian urban agriculture cannot be sufficiently addressed except understood as socially formed and historically strong-minded. While the initial three networks are found north of the water system plot, Lebanon, then again, shares limit with the flooded terrains, and so far as that is concerned has most farmers who chip away at the inundated fields.

Farmers develop various sorts of harvests, such as okra, cabbage, pepper, lettuce, maize, and rice for the urban markets. Yields, for example, cassava and maize, are principally developed at the upstream of the water system.

Figure 3- 1 Map of Ashaiman showing irrigation dam and adopted districts



Source: Google maps

3.7 Research Ethics

Given the importance of ethics in conducting research and the challenges around conducting research, universities go to great lengths to protect the dignity and safety of research participants (Silverman & Lemaire, 2006). The study took into consideration the following ethical considerations; permission from authorities, right of confidentiality as well as respect for human rights. Permission was firstly sought from the individuals, which will enable the researcher to collect data for the study. Concerning confidentiality, data collected by the researcher was kept secret from third parties. Respondents were also assured that any information provided in aid of the survey would be used mainly for academic purposes. Respondents' right to privacy, willingness, and voluntary participation, as well as

their informed consent, were guaranteed in terms of human rights. The researcher further ensured the confidentiality and anonymity of all the participants and information obtained in the aid of the study.

3.8 Response Rate

A total of 60 semi-structured questionnaires were administered to farmers on the farm in Ashaiman. The rate of response showed that out of the 60 questionnaires distributed, only 42 responded, and 18 did not respond. The is shown in Table 3-1 below:

Table 3- 1Response Rate

Response	Frequency	Percentage
Responded	42	70%
Not responded	18	30%
Total	60	100%

Source: Field survey, 2020

CHAPTER FOUR

DATA ANALYSIS AND DISCUSSIONS

4.1 Data Analysis

The analysis is made up of two principal sections. The first part explains the demographic characteristics of respondents in the survey, while the second section provides a study based on each of the objectives of the investigation. Both descriptive and inferential analyses were done.

4.2 Analysis of Demographic Information

This section explains the background characteristics of participants in the survey, the gender dispersion of respondents that took part in the study, age, and education was considered. Most of the questions posed to the respondents was directly related to the study hence influenced their responses. A breakdown of this information is presented in Table 4-1 below:

Table 4- 1 Socio-demographic Characteristic of Respondents

Variable	Frequency (n= 42)	Percent (%)
Gender		
Male	30	71.4
Female	12	28.6
Age(years)		
31-40	8	19
41-50	11	26.2
51-60	18	42.9
61-70	5	11.9
Farming Experience		
2 -10 years	7	16.7
11- 20 years	25	59.5
21-30 years	10	23.8

Source: Field survey, 2020

The results above show that most respondents were males representing 71 percent, while females were 29 percent of farmers interviewed. A high percentage of farmers were between the ages of 51 to 60, and the least period meant was 61 to 70 years. The majority of the respondents have been tilling and working on their farms for the past 20 years. This indicates that farmers around the catchment are experienced and skilled farmers and their information can be reliable for research and generalization.

Demographic characteristics of the respondents on the effectiveness of participatory communication in agrochemical usage. Cross-tabulations below;

Table 4- 2 Sex * participatory communication effectiveness in agrochemical usage Cross tabulation

		participatory communication effectiveness in agrochemical usage			*Total*
		Effective	Less effective	Not effective	
Sex	Male	5	7	18	30
	Female	3	5	4	12
	Total	8	12	22	42

Source: Filed Survey (2020)

Table 4- 3 Age groupings *participatory communication effectiveness in agrochemical usage Cross tabulation

Count		participatory communication effectiveness in agrochemical usage			
		Effective	Less effective	Not effective	Total
Age groupings	31-40	2	4	3	9
	41-50	1	7	5	13
	51-60	4	2	6	12
	61-70	2	1	4	7
	31-40	0	0	1	1
Total		9	14	19	42

From the above cross-tabulations, a whopping 22 respondents argued that farmers' involvement in any communication proceedings is ineffective, and just eight argued otherwise. These results prove that male farmers argue against the idea that farmers

participate in agricultural product usage (see table 4-2). All respondents below the age of 50 perceive the participatory communication effectiveness in agrochemical usage as not practical except for the age group from 51-60 years' old who view it as a bit significant (less effective).

4.3 Assessment of participatory communication on the utilisation of agrochemicals

Theme one: To examine how farmers are dialogically involved in the usage of agricultural chemicals in Ashaiman

The interviews showed that the implementation of participatory communication (dialogue) between farmers and stakeholders in the growth of ideas is not highly regarded by stakeholders since farmers are ignored, and their decisions are taken lightly. When a respondent was asked whether they are allowed to contribute and exchange ideas in the application of agricultural chemicals; One respondent expressed it this way,

"No, our views are not taken into consideration. Anytime there is a meeting for farmers, we tell them our opinions, but the next time they come back, the problems are still the same" Respondent 28

A decision without the control of interests and impact from others creates communication gaps amongst framers. Openly expressing suppositions without the pressure of others is the backbone for creating a conducive communicative environment. The assessments of Freire (2000) and Habermas and McCarthy (1984) about the praxis of exchange have a similar view. Freire underscores that the discourse among recipients and change operators have a similar status for the trading of information. Prominence on data streams of multidirectional share that something practically speaking with the details of

the common comprehension of open activity (shared understanding) allows individuals to partake in a decision making process. Habermas' hypothesis that informative activity expresses that in participatory communication circumstances, if all actors feel that the structure of communication is ideal and the validity of claim is open to negotiation, social action is oriented towards mutual understanding, then this theory can provide a theoretical foundation for participation of farmers (Freire, 2000; Habermas, McCarthy, & McCarthy, 1984). The execution of participatory communication in the phase of program usage is low since farmers seldom have dialogues with partner stakeholders on the use of agrochemicals.

Theme two: To identify the farmers' perceptions of the role of participatory communication on the use of agriculture chemicals

Although not all farmers have the courage to be open and dare to express their opinion following the reality that they feel, regarding their role when it comes to decisions relating to agrochemicals usage: when asked what the farmer thinks about their involvement in the communication process (exchange of ideas in the usage of agricultural-chemicals; A female respondent argued,

> *"We are not involved in the decision-making process when it comes to agrochemical usage, if they involve us we will know when and how to apply to prevent harm to other things in the environment" Respondent 12*

Another farmer argued abruptly that;

> *"We will be happy to share ideas on issues about agrochemical usage," Respondent 32*

Theme Three: To assess the benefits and challenges of participatory communication for agricultural chemical application in Ashaiman

On the challenges of effective participatory communication process for farmers and what benefits do farmers receive from sharing ideas on agricultural chemicals? A male respondent voiced out that;

"Not effective, we do not benefit because we are not involved" Respondent 3

It appeared to be that mutual understanding between farmers and agricultural stakeholders is probably the best requirement to cooperation in the utilization of agrochemicals. The most incessant level of participation was lower than expected. Participation seems to be minimal and its evaluation was lacking. Cooperation in assessment is deficient. This could clarify why farmers interest is professed to be available, yet minimal. It is not sufficient to have these programs and projects on agrochemicals utilization if individuals are taking part in them just once in a while. Once occasions are significant, it is important to infuse a long term continued support for the farmers to air out their views: both for strengthening and for maintainability of the task. These opportunities have the requirement for revolutionary strengthening on farmers cooperation similarly coined by these scholars (Alejandro Leal, 2007; Cooke & Kothari, 2001; Hickey & Mohan, 2004).

While this may bring about some significant results on assessing participatory amongst farmers in Ashaiman on the use of agro chemicals, this could likewise bring about more farmer support in discoursed identifying with agrochemical usage on the farms.

4.4 Discussion

The majority of farmers stated that the group discussions held with the plan of achieving set targets for the year lack external parties (agents and experts). This resulted in the group activity plan being misdirected. A Focus Group Discussion(FGD) held by the researcher to share and discuss the research questions of the study and develop a plan to bridge the communication gap between farmers and stakeholders revealed that many farmers prefer not to engage in any dialogue with agricultural experts because their problems are not solved. The results of the focus group discussion show that: The usage of participatory communication is the contribution of farmers in the forum with partners for shared trade of data for decision-making in stages: The Development of thoughts, arranging, execution, and observing by thinking about the ideal circumstance for exchange, specifically: fairness and equivalent access, autonomy, and open door for open dialogue are not sufficient as it seems to be.

The study corroborates with (Ansell, 2011); (Feldman & Quick, 2009); (Thacher, 2009); and (Quick & Bryson, 2016) that it is essential to acknowledge that the empirical support can be expressed through participation and communication; these tenets introduce an elementary knowledge and values into decision-making processes, and this can provide a vehicle for meaningful individual civic learning. This shows that the usage of participatory communication among farmers and partners in the agricultural sector is minimal and affects farmers' communities. The distinction accordingly shows profoundly marked contrasts between farmers at Lebanon and farmers at Zenu on the involvement of farmers in the decision-making process when it relates to the application of agrochemicals on their farms. Nevertheless, some farmers are dynamic and engaged in an exchange with

partners. The study result shows that the degree at which farmers cooperate and participate in the execution and strengthening of their goals and objective lacks effectiveness.

The findings affirm (Mefalopulos, 2005) and (Ascroft & Masilela, 1994) that participatory communication and investment are significant parts in building agreement among partners in every community. Moreover, participation has been adopted in the carrying out of the direction of small scale farmers. Still, the apprehension and practical application of the concept of the involvement are not suitable if discovered from the lack of participation from the outsiders in the utilization of the agricultural products. The first problem is that people seemingly take years to learn how to participate in crucial decisions. The second is that participation is impracticable without communication. However, what has not been so obvious is that not just any kind of communication makes authentic participation realizable. Farmer's understudy agrees that participation involves the more equitable sharing of theoretical and practical knowledge with various stakeholders to enhance the proper usage of agriculture products.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This section and chapter focuses on summarizing data analysis, discussions, and recommendations for further studies. This section provided recommendations for researchers and scholars to investigate further how farmers can be involved in the communication process to reduce the misappropriation of agrochemicals. The research questions were answered in this Chapter to achieve the objectives of the study.

5.2 Summary

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As this chapter has shown, there is still a great degree of problems in decision-w making and practice towards bridging the communication gap among agricultural a stakeholders. The low usage of participatory communication as a method for trading data s among farmers and stakeholders makes the data and information on farmers insufficient as

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a reason for decision making at the phase of arranging, actualizing and assessing farming activities among the group.

5.3 Recommendations

Based on the identified assessment of participatory communication on agricultural chemical usage, this paper suggests that farmers and stakeholder organizations should implement the following strategies to foster a proper and effective communication channel for the farmer-stakeholder:

There exists a weak link with regards to the communication among farmers and stakeholders. The contribution of farmers and their importance to society is not emphasized enough. There is the need to facilitate dialogue and cooperation, such as implementing a participatory method to build a consensus on the ideal situation so that small farmers can share the experience of their problems and needs. Second, to construct participatory communication capacity so that they can participate in dialogue during empowerment. This can be done in consultation with management that is the Ashaiman Municipal Assembly (ASHMA) and executives of the Ashaiman Irrigation Site under the Irrigation Development Authority Scheme (IDAS) as a mandate to implement and target specific activities to ensure the effectiveness of an open and free exchange of ideas among stakeholders and farmers.

Secondly, provide support systems for implementing participatory communication to build the capacity of actors and improve it therein. Increase the intensity of contact through dialogue and gathering of farmers for group meetings and create an atmosphere to enhance learning together. These support systems could range from a welcoming environment to committees set up to overlook the interest of farmers on the farm thus

community oriented involvement which will enforce the smooth operation of participatory communication amongst famers operating on a small scale.

Thirdly, integrating interpersonal communication channels and media as a learning tool for farmers and customize the learning material to the needs of farmers. The increased empowerment of small farmers needs a communicative intervention in the learning process of farmers through extension services. Government intervention creates important empowerment of small farmers, without negating the application of participatory method and dialogue. Conception of dialogue can ensure the participation of farmers in a responsible way in shaping the difficulties and needs facing them and finding an alternative solution, up to planning and implementing the agreed plan together to establish a smooth communication strategy for both parties.

This study examined the assessment of participatory communication on utilizing agro chemicals: a case of Ashaiman farmers.

The main argument or thesis of the study is that the current state of farmers' involvement in the decisions related to agrochemical usage. Below are the various answers to the research questions;

1. To what extent have farmers been engaged dialogically in establishing a common ground in applying agrochemicals on farmlands in Ashaiman? The study found that farmers were not involved in any communication process. Farmers only attended meetings, and their problems left unsolved. These challenges keep revisiting anytime there is a group meeting among farmers in the community. The researcher observed no adequate channel for farmers to share a common ground for them to understand the

use and application of agrochemicals in their farms. All agro chemicals used are as a result of social referrals.

2. The second question posited, what are the perceptions of farmers on the role of participatory communication on the use of agrochemicals in Ashaiman? Farmers believe, if they are involved or participate in the communication process, utilization of agrochemicals will be more straightforward and, in the long run, will reduce the adverse effects of these chemicals on the nearby communities. Many perceive participatory communication as a one-way affair where stakeholders listen and do not act on the issues and challenges faced by farmers.

3. The third question states, what are some of the challenges faced by farmers concerning the effective use of participatory communication in the application process? The low level of literacy in this regard, information, and communication technology (ICT) tools such as mobile phones, radios, and television can play an essential role in disseminating and sharing timely and relevant information to farmers, but these tools are expensive to acquire. The findings of the study discovered that the lack of knowledge on e-Agriculture tools was the major problem that affected the farmers in the study area.

4. The last research question, what are the efficient communication strategies that can enhance the implementation of agrochemicals in Ashaiman? This was answered as: When planning a communication procedure for sharing agricultural data and information in the investigation territory, it is critical to consider the sources accessible, channels, and financial status of small scale farmers. For farmers to improve access and utilization of atmosphere data, significant components of communication ought to incorporate radio, cell phones, extension workers, individual

farmers, and agricultural information sources providers. Government intervention is necessary to bring effective and efficient communication strategies to enhance consensus among farmers and stakeholders to acquire the needed knowledge and skills to utilize agrochemicals in the study area properly.

5.4 Conclusion of Study

To conclude, even though assessing and evaluating participatory communication implications on agrochemical usage is still a challenge for many farmers, this raises questions about the efficacy of policy structures, systems, and actors traditionally associated with involving farmers in the decision making process related to agricultural product utilization. This paper looked at the role of the stakeholder under the positions they occupy and the influence they wield, as they are supposed to be vested with the power needed to demonstrate an exemplary policy implementation and, by so doing, define opportunities and issues, build social capital and mobilize necessary resources in ways that lead to effective action on involving farmers in programs for the proper utilization of agrochemicals.

The agrochemical industries and manufacturers need to be in constant communication with farm managers and farmers to receive feedback on products that will aid them in bettering their products. Over the years, the use of social media due to advancements in technology has come to stay. Farmers already possess mobile devices, hence the departments in charge of the dispensing and provision of agrochemicals can enlighten farmers on the use of such gadgets in order to make telephone calls to enable them exchange ideas with farm managers and extension officers. There should also be

demonstrations, interactions and forums for both farmers, farm managers and stakeholders so both ends can benefit from the process.

To the farmers, the readiness of them to shift from the social referral method of utilizing agrochemicals will sharpen the speed at which this issue is checked and scrutinized to enable a better communication process between they and their superiors. Farm managers are also to provide better channels of communication and an environment that is visibly welcoming for better administering of the application process so yields are boosted and a high standard of living is achieved.

Further studies and conclusions can be drawn from this study in regards to participatory communication in relation to the use of agrochemicals. To this effect, the study focused on assessing and evaluating how participatory communication has influenced farmers' decisions in the application of chemicals. Thus we summarize the findings of the research beginning with a restatement of the main argument of the dissertation and related research questions, establishing that the thesis or main idea has been confirmed and that the research questions have been answered.

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APPENDIX

INTERVIEW GUIDE

This study is being conducted by a Master's student in assessing participatory communication on Agrochemical applications among farmers in Ashaiman. There are no significant risks to you from your participation in this survey. As academic research, your identification will remain anonymous, and you are also assured of utmost confidentiality in the reporting of research findings. You are kindly required to provide your honest response.

SECTION A
Socio-Demographic Factors

Please tick the appropriate box

1. Gender: Male Female
2. Age: …….

3.What type of crops do you grow? …….

4. History of agricultural-chemical usage? ……
5. How often do you use agrochemicals? ……

SECTION B

SPECIFIC OBJECTIVES

a) To examine how farmers are dialogically involved in the usage of agricultural chemicals in Ashaiman.

6. Are farmers allowed to contribute and exchange ideas in the application of agricultural chemicals?

7. How often are farmers allowed to contribute and exchange ideas in applying agricultural chemicals on the farm?

b) To identify the farmers' perceptions of the role of participatory communication on the use of agriculture chemicals.

8. What does the farmer think about their involvement in the communication process (exchange of ideas in agricultural-chemicals)?
9. Does it enable farmers to feel their opinions are being considered?
10. Why do you think the opinion of farmers is essential?

c)To assess the challenges of participatory communication for agricultural chemical applications in Ashaiman.

11. How effective is the participatory communication process for farmers?
12. What benefits do farmers receive from sharing ideas on the use of agricultural chemicals?

d)To provide recommendations on communication strategies that can enhance the implementation of agricultural chemicals in Ashaiman.

13. What communication strategies can be used to improve participation from the farmers?
14. What are some of the opportunities and constraints encountered during the communication process?