



# Evaluation of Subsidized Fertilizer Distribution to Corn Farmers in Ogan Komering Ulu Regency

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## ABSTRACT

This study reviewed the Evaluation of Subsidized Fertilizer Distribution in Corn Farmers in Ogan Komering Ulu Regency, South Sumatra Province. This research aims to analyze the distribution of subsidized fertilizer from producers to farmers of corn crops whether it is following the applicable rules, and to analyze the constraints in the distribution of subsidized fertilizer to corn crop farmers in Ogan Komering Ulu Regency, South Sumatra Province. The research method used is the survey method. The respondents of the study were corn farmers in Ogan Komering Ulu Regency as many as 105 people. Data analysis uses quantitative descriptive analysis techniques with the help of Likers Approximation by using scores on each question item in the questionnaire by making the highest answer to the highest answer "1" precise and lowest score "0", Not Exactly. The data that has been indicated is then determined by the overall questionnaire percentage by grouping the data by the type of statement. Furthermore, the results obtained are interpreted using the percentage category based on the criteria for assessing the accuracy of subsidized fertilizer distribution, and using Quantitative Descriptive Analysis with the help of the Problem List Table is to use an alternative answer on each question item in the questionnaire by making an alternative "Yes" answer and an authentic "No" answer. The data that has been indicated is then determined by the overall questionnaire percentage by grouping the data by the type of statement. Furthermore, the results are interpreted using the percentage category based on the criteria for assessing the constraints of subsidized fertilizer distribution. The results of this study found that the implementation of subsidized fertilizer distribution at the research site, namely Ogan Komering Ulu Regency, especially in Lengkiti District, East Baturaja District, and Sosoh Buay Rayap District has been carried out following the implementation instructions that have been set. But there are still problems that occur such as the Highest Retail Price (HRP) and the use of Farmer Cards that have not been implemented in the field. Fertilizer subsidy policies are measured in six precise indicators, type, quantity, price, place, time, and quality. Based on the six indicators, 2 indicators of place and quality are categorized very precisely / according to the rule, while for 2 indicators of the type and the quantity can be categorized appropriately / quite according to the rule. Timely indicators can be categorized as inappropriate / not following the rules, while the price indicators for fertilizer subsidy policies can be categorized as inappropriate/very not following the rules due to the problem of price gaps in subsidized fertilizers in farmers, Line III (distributors) sell subsidized fertilizers above the Highest Retail Price (HRP) to Line IV (official kiosks) because there are additional transportation and loading and unloading costs and purchases with a pay system after harvest. Thus causing retailers to also sell subsidized fertilizer to farmers above the Highest Retail Price (HRP).

## 1. INTRODUCTION

### 1.1. Research Background

The agricultural sector proved to be the only sector that was able to survive and even contribute positively to GDP during the 2020 pandemic. This is because the food fulfillment of 279 million Indonesians is very dependent on agricultural development, in addition to foreign exchange contributors

through the export of agricultural products, food industry raw material providers, food and nutrition suppliers, labor absorption, and support for the movement of other economic sectors. Food is a fundamental need for humans to be able to sustain life and therefore food adequacy for everyone at all times is a human right that deserves to be fulfilled. Based on this, the problem of meeting food needs for all residents at any time in a region becomes the main target of food policy for the government of a country. Indonesia as a country with a large population faces very complex challenges in meeting the food needs of its population, so the

issue of food security becomes a central issue in development and becomes a focus of agricultural development.

To realize national food security, the government through the Ministry of Agriculture set indicative targets for the production of several agricultural commodities for 2021, including rice as much as 62.5 million tons, corn 31.9 million tons, soybeans 0.51 million tons, and sugarcane 34.31 million tons contained in the Strategic Plan of the Ministry of Agriculture 2020-2024 [1]. For this reason, it is necessary to achieve the improvement of productivity and quality of agricultural products through the application of cultivation technology appropriately with the use of production facilities according to the techniques recommended in each region.

As the population increases, more food needs must be provided. Therefore, the achievement of agricultural production that continues to be accompanied by the transfer of agricultural land functions is a challenge for the Government. In the effort of intensification, fertilizer plays a role in the use of superior seedlings that need to be balanced with sufficient nutrient intake. While in the effort of extensibility, fertilizer is needed to increase land productivity and restore land productivity conversion land. The effectiveness of the use of subsidized fertilizers is directed at the application of balanced and organic fertilization according to specific recommendations of the location or technical standards of the recommended use of fertilizers. The application of balanced fertilization needs to be supported by accessibility in obtaining fertilizer at affordable prices. The availability of fertilizer, as one of the main means of production, especially subsidized fertilizers, is expected to be fulfilled according to principles 6 (six) precisely, namely: on time, quantity, type, place, quality, and price.

Ref. [2], stated that the government policy is explained in the Indonesian State Budget every year, if in a certain year it is increased then the budget for fertilizer subsidies will increase, but if the budget is in a certain year decreases then the fertilizer subsidy budget decreases. In addition, the area of land owned by farmers, the level of land disbursement, and farmers' income can encourage the level of demand for subsidized fertilizers.

Law No. 9 of 2020 concerning The State Revenue and Expenditure Budget for the fiscal year 2021 followed up with Presidential Regulation No. 113 of 2020 concerning Details of State Revenue and Expenditure Budget for the fiscal year 2021, has been mandated a fertilizer subsidy management program. As a follow-up to the policy, the Government has issued Regulation of the Minister of Agriculture Number 49 of 2020 concerning the Allocation and Highest Retail Price of Subsidized Fertilizers in the Agricultural Sector for the Fiscal Year 2021, as a formal legal in the distribution of subsidized fertilizers and payment of fertilizer subsidies.

Director-General of Infrastructure and Agricultural Facilities, Ministry of Agriculture of the Republic stated in the Technical Guidelines for Subsidized Fertilizer Management for the fiscal year 2021, that subsidized fertilizer is an item under supervision whose procurement and distribution receive subsidies from the Government for the needs of farmers in the agricultural sector. As an item in supervision, subsidized fertilizer is regulated by several regulations both through presidential regulations and ministerial regulations. Among them through Presidential Regulation No. 15 of 2011 concerning changes to Presidential Regulation No. 77 of 2005 concerning the Determination of Subsidized Fertilizers as Goods Under Supervision, through Regulation of the Minister of

Trade No. 15/M-DAG/PER/4/2013 concerning Procurement and Distribution of Subsidized Fertilizers for the Agricultural Sector, and Regulation of the Minister of Finance No. 68/PMK.02/2016 concerning Procedures for Provision, Disbursement, and Accountability of Fertilizer Subsidy Fund, and regulated through Regulation of the Minister of Agriculture Number 49 of 2020 concerning Allocation and Price of The Highest Retail Price (HRP) of Subsidized Fertilizers for the Agricultural Sector fiscal year 2021.

The implementation of the Ministerial Regulation needs to be followed up with the issuance of the Decree of the Head of the Provincial Agricultural Office and the Decree of the Head of the District Office on the allocation of fertilizer in each region, as a guide for fertilizer producers, distributors and distributors in Line-IV in providing and distributing subsidized fertilizer in their areas of responsibility. Decree of the Head of the Food Crop Agriculture and Horticulture Office of South Sumatra Province Number: 01.A / KPTS / DIS. PTPH/PSP/I/2021 concerning The Allocation and Highest Retail Price of Subsidized Fertilizers in the Agricultural Sector fiscal year 2021. became one of the sources of Regional Native Income (PAD) Ogan Komering Ulu Regency.

## 1.2. Literature Review

### 1.2.1. Evaluation Concept

Evaluation is a tool or procedure used to find out and measure something in the atmosphere in a predetermined way and rules. Program evaluation is a systematic investigative activity about something valuable from an object. Program evaluation is a process. Explicitly evaluation refers to the achievement of goals whereas implicitly the evaluation should compare what has been achieved from the program with what should have been achieved based on established standards [3].

Assessment activities in program evaluation are not only carried out at the end of program activities but should be carried out from the beginning, namely from the implementation of the program design, the implementation of the program, and the results of the program. Various evaluation models can be used depending on the evaluation objectives set. However, it should also be noted that the success of an overall program evaluation is not only influenced by the proper use of an evaluation model but also influenced by various factors.

The use of evaluation to find out the level of mastery or understanding of a person's established competencies. 2. To find out the difficulties or obstacles faced by someone in his activities so that holding an evaluation can help solve the problems and difficulties faced. The purpose of the evaluation is to correct shortcomings and constraints. Evaluations are often encountered on a job that has been done.

The evaluation produces policy-relevant knowledge of the mismatch between the expected policy performance and the one produced. So it helps policy-making at the policy assessment stage of the policy-making process. The evaluation not only yields conclusions as to how far the problem has been resolved but also contributes to clarification and criticism of the underlying values of the policy, assisting in the adjustment and re-formulation of the problem. A good example of an evaluation is an analysis type that helps clarify, criticize, and debate values by questioning the dominance of technical reasoning that underlies environmental policies in society [4].

Evaluation is a must when one program/activity has been completed. Through that evaluation, it can be known how the effectiveness of the program/activity is carried out following what is desired and if not, is in a position to stop or improve it. The need and demand for accountability raise a need for evaluation. Accountability is not limited to an activity, but also to improving the implementation of programs and the development of society. According to Ref. [5], Evaluation is: "Research to collect, analyze, and present useful information about the evaluation object, assess it by comparing it with evaluation indicators and the results are used to make decisions about the evaluation object."

Evaluation activities are very strategic because they determine whether a policy is good or not, and whether the policy made is on target or not [6]. Similarly, with evaluation, it will be known whether a policy touches the needs of the community or not. Evaluation activities can also be used to improve policy performance when it is known that things are wrong, weak, or lacking. This chapter will explain the understanding, nature, function, types, approaches, and stages of policy evaluation. In general, the term evaluation is matched with appraisal (appraisal), giving numbers (rating), and assessment (assessment). In a specific sense, evaluation deals with the production of information regarding the value or benefits of policy outcomes. When a policy result has value, it is because it contributes to the goals and objectives that have been set in a policy. This means that a policy or program has achieved meaningful performance, which means that the policy problems made are clear and can be addressed.

According to Ref. [7], the success of an evaluation activity will also be influenced by the success of the evaluator in carrying out the evaluation procedure. The procedure in question is the main step that must be taken in the evaluation activity. The evaluation development procedure consists of: (1) evaluation planning which includes analysis of needs, formulating evaluation objectives, compiling grids, developing instrument drafts, trials and analysis, revising and compiling final instruments, (2) implementation of evaluation and monitoring, (3) data processing and analysis, (4) reporting evaluation results, and (5) utilization of evaluation results. An evaluator should be able to make a good evaluation plan. The first step that needs to be done in the evaluation activity is to make a plan. This planning is important because it will affect the next steps, even affecting the effectiveness of the thorough evaluation procedure.

### 1.2.2. Fertilizer Distribution Concept

Fertilizer distribution is one aspect of marketing. Distribution can also be interpreted as a marketing activity that seeks to facilitate and facilitate the delivery of goods and services from the product to consumers so that their use is following what is needed (type, quantity, price, place, and when needed).

According to Suryanto [8], Distribution management is a strategy for developing distribution channels from planning, organizing (organization), operating (operation), and controlling (controlling) to achieve company goals. Goods from the manufacturer through intermediary channels to the hands of consumers or the last user.

In terms of distribution, there are two sides to play, namely producers and consumers. The manufacturer as the principal side plays a role so that a product can be spread evenly. While on the consumer side is how they as product users can get that product

easily. The two sides meet in the meeting order, which is the factor of closeness and ease.

Ref. [9] argues that the distribution system can be interpreted as a series of links between producers and consumers to distribute products/services to reach consumers efficiently and easily accessible. Distribution is understood as a set of organizations that allow products to be purchased by consumers or businesses.

The fertilizer distribution system is expected to provide information about the accuracy during the fertilizer distribution process, namely the accuracy of the amount of fertilizer divided, the accuracy of the type of fertilizer given, the accuracy of fertilizer prices following the Minister's regulations, and the accuracy of targets or precisely to fertilizer consumers. In addition to helping farmers, this system is also designed to help retailers, who through this system can be informed quickly and precisely regarding the amount of fertilizer supply, the number of fertilizer purchases that have been made, and the value of per period fertilizer sales.

Ref. [10] stated that the distribution of fertilizer is carried out concerning Regulation of the Minister of Home Affairs *Permendagri No.17 / MDAG / PER / 6/2011* concerning the procurement and distribution of subsidized fertilizers for the agricultural sector. In this regulation, the government, producers, distributors, and retailers are parties involved in the procurement and distribution of subsidized fertilizers and also play an important role in the implementation of subsidized fertilizer procurement and distribution. Procurement and distribution of fertilizer must meet the principle of 6 (six) precise, namely (1) type, (2) quantity, (3) price, (4) place, (5) time, (6) quality). Thus in the management of subsidized fertilizers, an understanding of all relevant stakeholders is needed in realizing these goals.

The effectiveness of subsidized fertilizer distribution by the government is analyzed through six precise indicators, namely the right type (suitability of the type of fertilizer used by farmers with recommendations), the right price (the price received by farmers when purchasing subsidized fertilizer following the Highest Retail Price), precise quality (farmers always get subsidized fertilizer following the quality set by fertilizer producers), on time (whether or not subsidized fertilizer is on the market when it comes time to use the fertilizer), right of place (distance farmers buy subsidized fertilizer with their farmland) and precise amount (the dose used by farmers according to the government's recommendation to carry out balanced fertilization) [11].

1). **Precise Type.** Precise type is that there are 5 types of fertilizers subsidized by the government, namely NPK, SP-36, Urea, ZA, and Petroganik. The type of subsidized fertilizer that farmers use.

2). **Precise Time.** precise time is the time when farmers should get subsidized fertilizer rations when farmers need

3). **Precise Place.** The precise place is a condition where farmers buy subsidized fertilizer inline IV or farmer groups according to the provisions.

4). **Precise quantity.** The precise quantity is the amount of fertilization carried out following the dose or amount based on the analysis of soil nutrient status and plant needs recommended by the government. The provision of the right amount of fertilizer will make the periodic growth of the plant optimally which can be seen from the height of the plant, the diameter of the stem, the number of leaves, and the number of branches.

5). **Precise Price.** The precise price is the price of subsidized fertilizer following the Highest Retail Price (HRP) that has been

determined by the Government. HRP fertilizer is subsidized for all five types of fertilizers that are currently in force.

6). **Precise Quality.** The precise quality is referring to the authenticity of subsidized fertilizers that have standardized fertilizer quality, the level of knowledge of farmers about the good or bad quality of subsidized fertilizers received by comparing the physical conditions of each subsidized fertilizer. Distribution of subsidized fertilizers ranging from producers to farmers using a closed distribution system [12]. Closed distribution is divided into two segments, namely: (1) the distribution system from manufacturer to retailer (line IV); and (2) the system of acceptance by farmers. The two segments must be integrated, so that the flow of fertilizer from producers to farmers does not experience leakage, especially on line IV. That is, the distribution of fertilizer from producers to farmers must be supervised so that fertilizer reaches farmers following the HRO set by the government.

### 1.2.3. *Subsidized Fertilizer Concept*

Subsidies are money or goods assistance to associations, foundations, and so on that are usually given from the government to the community. The subsidy includes all assistance in the form of money or goods provided by the government to private companies and government companies. The purpose of providing subsidies, among others, is to maintain price stability, and cover losses suffered by companies and others. Subsidized fertilizer is an item under supervision whose procurement and distribution gets subsidies from the Government for the needs of farmers in the agricultural sector.

Ref. [13] stated that Fertilizer is one of the important inputs in increasing the productivity of food crops so that its existence and utilization have a strategic position. One of the policies in the procurement of fertilizer is fertilizer subsidies. Fertilizer subsidies have long been implemented with various policies that follow such as fertilizer procurement policies, fertilizer distribution, and subsidized fertilizer supervision. In its implementation, this fertilizer subsidy policy has not been optimal so improvement steps are needed such as (i) the allocation of fertilizer (quota) is increased from the need for one year to a breakdown of fertilizer needs for two years, (ii) the last point is in the farmer group (line v), (iii) the determination of the retailer's kiosk following the proper rules and (iv) the allocation of sufficient funds and the determination of permanent officers for the operation of PPNS and KP3 officers.

Fertilizer subsidy policies are directed to achieve:

(1) intermediate purposes, namely increasing the ability of farmers to buy fertilizer in quantities that are following the recommended dose of location-specific balanced fertilization; and (2) the ultimate goal is to increase agricultural productivity and production to improve national food security.

The fertilizer subsidy policy is a policy choice that requires considerable financing support [12]. The policy not only produces positive benefits, but also negative impacts that can distort the market so that the allocation of economic resources becomes inappropriate. Fertilizer subsidy policy can be justified because the economic benefits are not only directly, namely to farmers and fertilizer producers, but also indirectly will accelerate the diffusion of agricultural business technology and the multiplier

effect (multiplier effect) of increasing the production of agricultural businesses and fertilizer industry to other sectors.

Experience so far shows that the limited government budget will create two conditions as follows: (1) the provision of fertilizer subsidies is prioritized for food crop farming businesses that are generally small-scale, and (2) the calculation of the total volume of subsidized fertilizer for food crop farming businesses is based on planting area multiplied by the recommended fertilization rate. The first condition gives rise to the seepage of subsidized fertilizers into the non-subsidized fertilizer market. While the second condition causes the total volume of subsidized fertilizer to be much lower than what farmers need.

The form of fertilizer purchase price subsidy received by farmers has been in the form of determining fertilizer HRP at the farmer level which is lower than the price in the international market. The difference between HRP and international market prices is borne by the government. Broadly speaking, subsidizing the purchase price of fertilizer to farmers aims to (1) attract farmers to adopt inorganic fertilizer technology and (2) help farmers reduce the cost of the farming business, so that the profits of farming businesses increase.

Ref. [13] argue that the preparation of RDK / RDKK at the village level does not use participatory principles. Farmer participation is still very low in the preparation of RDK / RDKK, especially on implementation variables. Meanwhile, the role of Agricultural Extension As a facilitator and innovator shows maximum results on implementation variables. Although the farmer card program is not perfect, the database mechanism through e-RDKK is a useful program as a database for distributing various government assistance, including fertilizer.

In the field there is still an abuse of subsidized fertilizer used in plantation crops that should use non-subsidized fertilizers [14]. This results in the scarcity of fertilizer which ultimately harms small farmers who use subsidized fertilizer. This condition is caused by weak supervision of the ministry and the ministry to crack down on rogue distributors who distribute subsidized fertilizer outside the e-RDKK that has been established. In 2021, subsidized fertilizer distribution using e-KTP photocopy based on e RDKK. Previous research that has been done in relation this topic (Table 1).

### 1.3. *Research Objective*

The purpose of this study is: (a) to analyze the distribution of subsidized fertilizers from producers to farmers of corn crops in Ogan Komering Ulu Regency following applicable rules; (b) to analyze the constraints in the distribution of subsidized fertilizers to corn crop farmers in Ogan Komering Ulu Regency.

The usefulness of this research can theoretically increase knowledge in terms of the effectiveness of the distribution of subsidized fertilizers to farmers judging from what happens to its implementation. Practical Uses of this research are useful for government agencies of Ogan Komering Ulu Regency as input materials in carrying out supervision of subsidized fertilizer distribution so that it can run flexibly, efficiently, and effectively following the 6 (six) principles of fertilizer distribution set, and useful for other parties interested in the distribution of subsidized fertilizer.

Table 1. Previous Research

Author (s)	Title	Analysis	Result
Druihe, Z. and Barreiro-Hurlé, J. [16]	Fertilizer subsidies in sub-Saharan Africa (Fertilizer subsidies in Africa sub-Sahara)	Pseudo experimental approach (Propensity Score Matching)	That the subdivided fertilizer program has effective in increasing the use of fertilizers, average yields, and agricultural production but Success depends largely on implementation.
Widodo [17]	Effective Implementation of Subsidized Fertilizer Distribution Policy in Nunukan Regency	Qualitative Descriptive Analyst	Effectiveness of Implementation of Subsidized Fertilizer Distribution Policy in Nunukan Regency is still low (Less Effective)
Suwardi [18]	Evaluation of The Implementation of Subsidized Fertilizer Distribution in Sambaliung District of Berau Regency	Qualitative Descriptive Analysis	That the implementation of subsidized fertilizer distribution in Sambaliung Subdistrict is still ineffective, especially in local places, amounts, and prices
Nini Rigi, Syahyana Raesi dan Rafael Azhari [19]	Analysis of the Effectiveness of Subsidized Fertilizer Policies for Rice Farmers in Nagari Cupak District of Gunung Talang Solok Regency	Qualitative Descriptive Analysis	Based on the four indicators, three indicators, namely type indicators, time, and number can be categorized as effective, while for the right indicators the price cannot be categorized as effective.
M. Radinal Kutsar, <i>et al</i> [20].	Analysis of The Scarcity of Subsidized Fertilizer and Its Effect on Rice Productivity ( <i>Oryza sativa</i> ) in Montasik District, Aceh Besar Regency	Qualitative and Quantitative Analisis	The impact of scarcity that occurs in Montasik District causes the exact amount of subsidized fertilizer available.

## 2. MATERIALS AND METHODS

### 2.1. Variable Operational Limitations

The sample of this study is farmers who use subsidized fertilizers registered in the e-RDKK 2022 Subsector of Corn Commodity Food Crops. Farmers receiving subsidized fertilizer are individual Indonesian citizens and/or their families who do agricultural business in the field of corn commodity food crops. A farmer group is a collection of farmers formed based on common interests, similar conditions in the social, economic, and resource environment, the similarity of commodities, and familiarity to improve and develop the efforts of its members.

Subsidized Fertilizer is an item under supervision whose procurement and distribution receive subsidies from the Government for the needs of farmers in the agricultural sector. Distribution is the process of distributing Subsidized Fertilizer from Fertilizer Subsidy Implementers / PT Pupuk Indonesia (Persero) to Farmers as end consumers. Subsidized Fertilizer Retailer Kiosk is a distributor in line IV following the provisions of the Minister of Trade on the procurement and distribution of subsidized fertilizer in the agricultural sector.

Corn farmers can only buy types of fertilizers subsidized by the government according to e RDKK 2022, namely Urea and NPK only. On-Time is when farmers need and buy fertilizer available in line IV / official kiosk. Right Place is farmers buy subsidized fertilizer inline IV / official kiosks instead of illegal at the kiosk. Precise Quality is when farmers buy the amount of fertilization that corresponds to the dose or amount based on e RDKK 2022. The right price is that farmers buy subsidized fertilizer, at a price that is in accordance with the Highest Retail Price (HRP) that has been determined by the Government. Precise Quality is subsidized fertilizer purchased by packaging farmers is still intact, on the packaging, there is the inscription "GOVERNMENT SUBSIDIZED FERTILIZER, GOODS UNDER SUPERVISION" and there is a registration number, as well as the SNI logo. Manufactured by PT Pupuk Indonesia (Persero) Group.

e-RDKK is a data collection system for farmers receiving fertilizer subsidies and RDKK in the form of a web base based on the Population Master Number. A farmer's Card is a card issued by Banking to Farmers for use in subsidized fertilizer redemption transactions through Electronic Data Capture machines at authorized retailers. The Highest Retail Price (HRP) is the price of Subsidized Fertilizer set by the Minister of Agriculture to be purchased by farmers in certain packaging at Line-IV Distributors.

Purchasing Power is the ability of farmers to buy a large amount of subsidized fertilizer requested at a particular kiosk, at a certain income level, and in a certain period (cash or debt). Fertilizer availability is the readiness of fertilizer to be used or applied within a predetermined time or available circumstances. Infrastructure is a basic service, both physical and non-physical, an example of good or damaged road conditions.

### 2.2. Research Approach Model

The research approach is the whole way or activity in a study that starts from the formulation of problems to conclude. Research closeness there are two types, namely quantitative approach, and qualitative approach. The approach models that will be used in this research are quantitative research approach models and qualitative research. A qualitative research approach is an approach based on the philosophy of positivism, used to examine certain populations or samples, data collection using research measuring instruments (instruments), and qualitative data analysis, to test and prove hypotheses that have been made/determined. In general qualitative methods. It consists of survey methods and experimental methods. Survey research methods are one of the qualitative research approaches used to obtain data that occurred in the past or present, about beliefs, opinions, behavioral characteristics, and variable relationships, and to test several hypotheses about sociological and psychological variables from samples taken from a particular population. Data collection techniques with observations (interviews or questionnaires) and research results tend to be generalized.

### 2.3. Scope of Research

The research was conducted in Ogan Komering Ulu Regency, South Sumatra Province. Location determination is done deliberately (purposive) with the consideration that in Ogan Komering Regency there are still various problems in the distribution of subsidized fertilizers, this research was carried out in February-March 2022.

### 2.4. Research Methods

The research method used in this study is a survey method wherein this method according to Arikunto [21] can pass all the information that is expected to represent the purpose of the research. The survey method is a method for collecting data or more in-depth information about the object to be researched. The data was obtained by interviewing respondents who were in the sample using questionnaires as a preparation tool.

#### 2.4.1. Sample Withdrawal Method

The method of drawing examples that will be used in this study is the multistage sampling method followed by the selection of probability sampling methods in the form of simple random sampling methods (simple random selection) from the entire population of corn farmers in Ogan Komering Ulu Regency, which is registered in the e RDKK 2022 system that has been inputted during 2021. The selection of samples at the district level was taken from the top 3 Perikat districts of corn farmers NIK registered in the e-RDKK 2022 system, namely: Lengkiti District, East Baturaja District, and Sosoh Buay Rayap District, which can be seen in Table 2.

Table 2. The population of corn farmers registered in the e-RDKK 2022 system in Ogan Komering Ulu Regency.

No.	District	Farmer Population Corn Crops
1	Lengkiti	2.374 NIK
2	Sosoh Buay Rayap	494 NIK
3	Baturaja Barat	280 NIK
4	Baturaja Timur	767 NIK
5	Lubuk Batang	266 NIK
6	Lubuk Raja	0 NIK
7	Peninjauan	0 NIK
8	Sinar Peninjauan	0 NIK
9	Kedaton Peninjauan Raya	0 NIK
10	Semidang Aji	0 NIK
11	Pengandonan	0 NIK
12	Muara Jaya	0 NIK
13	Ulu Ogan	0 NIK
<b>Total</b>		<b>4.181 NIK</b>

Source\*): E-RDKK System of the Ministry of Agriculture of the Republic of Indonesia in 2021

To determine the sample size using the Slovin formula, namely :

$$n = \frac{N}{1 + (N \cdot e^2)}$$

Where:

n = Sample Size

N = Population Size

e = Sample Stabilization Errors that can still be tolerated by 10%  
Using the Slovin formula above, the number of samples obtained is :

$$n = \frac{4181}{1 + (4181) 0,10^2}$$

$$n = \frac{4181}{1 + (4181) 0,01}$$

$$n = \frac{4181}{1 + 41,81}$$

$$n = 97.66 \text{ rounding } 98$$

Then the number of samples obtained as many as 98 samples. (Table 3).

Table 3. Number of research samples in corn farmers registered in the e-RDKK 2022 system

No.	Subdistrict / Village	Farmer Population*) Corn Crops	Total Sample 7% of NIK (Population Master Number)
<b>1</b>	<b>Lengkiti District</b>		
	Bandar Jaya Village	366 NIK	25
	Karang Endah village	261 NIK	18
<b>2</b>	<b>Baturaja Timur District</b>		
	Kemelak BL Village	516 NIK	36
	Sepancar LK Village	155 NIK	10
<b>3</b>	<b>Sosoh Buay Rayap District</b>		
	Penyandingan Village	166 NIK	11
	Penantian Village	75 NIK	5
	<b>Number of Sample Farmers</b>	-	<b>105</b>

Source\*): E-RDKK System of the Ministry of Agriculture of the Republic of Indonesia in 2021

The highest number of samples in this study was in Kemelak Bidung Langit Village (Table 3). East Baturaja District has as many as 36 samples, while the lowest sample in The Village of Penantian Sosoh Buay Rayap District has as many as 5 samples. Data collection includes primary and secondary data. Primary data is obtained directly through corn farmers. Secondary data was obtained by the study of the company and agencies that are watered down with this research. With this method, researchers expect to be able to get complete information about the object being studied. Data that has been obtained from the field is processed mathematically, presented tabulated, then explained descriptively following the purpose of this study.

#### 2.4.2. Data Processing and Analysis Methods

Research data is tabulated, and primary data obtained through Quisioner is tabulated based on the number of farmer identities. The data used in this study includes primary data and secondary data. Primary data can be directly obtained from farmers through a list of questions answered using questioners, while secondary data is obtained from Kiosk, Distributor and Agriculture Office of Ogan Komering Ulu Regency. The data collection and processing methods that will be used in this research are surveys (questioner) because the location between respondents is close together. Researchers use personally administered Questionnaires, which are the technical use of questionnaires that are delivered and collected directly. Research can be directly related to respondents and provide explanations as necessary and questionnaires can be collected directly after completion of being answered by respondents so that primary data is obtained. The documentary is a method of collecting data from internal

documents, i.e. document documents that are recorded and stored within an organization to obtain secondary data.

This research will use quantitative descriptive analysis and qualitative descriptive analysis tools. To analyze the problem of whether the distribution of subsidized fertilizer from producers to corn farmers in Ogan Komering Ulu Regency is following the applicable rules, the data analysis that will be used in this study using Quantitative Descriptive Analysis with the help of Likers Approximation, is to use the score on each question item in the questionnaire by making the highest answer to the highest score "1" Precisely and the lowest score "0". To measure the percentage of each problem and whether the distribution of subsidized fertilizer from producers to corn farmers is in accordance with the applicable rules, primary data in the form of the number of respondents' answers are collected with questionnaires compiled using the Guttman scale To measure the percentage of each problem whether the distribution of subsidized fertilizer from producers to corn farmers is following the applicable rules, primary data in the form of the number of respondents' answers collected with questionnaires compiled using the Guttman scale. The percentage will be obtained through the following formula:

$$\text{Percentage of Achievements} = \frac{\sum n \text{ Real}}{\sum n} \times 100\%$$

Where: :

$\sum n$  = Number of Respondents' Samples

$\sum n \text{ Real}$  = Number of Samples answered with a score of 1

To analyze questionnaire data, the data that has been specified is then determined as the overall questionnaire percentage by grouping the data based on the type of statement, namely positive statements, and negative statements, then the results are interpreted using the percentage category based on the criteria for assessing the accuracy of subsidized fertilizer distribution.

Table 4. Criteria for assessing the accuracy of subsidized fertilizer distribution

Percentage of Answers "Score 1":	Criteria
100 %	Very Precise/Following the rule
80 - 99 %	Precise/Following the rule
70 - 79 %	Less Precise/Not follow the Rules
60 - 69 %	Not Precise/Not follow the Rules

As for analyzing what are the problems of the constraints in the distribution of subsidized fertilizer to corn farmers in Ogan Komering Ulu Regency will use Qualitative Descriptive Analysis with the help of the Table List The problem is to use the alternative answers on each question item in the questionnaire by making an alternative answer "Yes" and an alternative answer "No". To measure the percentage of each obstacle in the distribution of subsidized fertilizer to corn farmers, primary data in the form of the number of respondents' answers were collected with questionnaires compiled using the Guttman scale.

According to Ref [18], on the Guttman scale there are only two intervals, for example, "yes" or "no", "ever" or "never", and "agree" or "disagree". The data obtained are presented in the form of a table to know the percentage and frequency of each alternative answer as well as to facilitate the reading of the data. The percentage will be obtained through the following formula:

$$\text{Real } \sum n$$

$$\text{Percentage of Problems} = \frac{\sum n}{\text{Real } \sum n} \times 100\%$$

Where:

$\sum n$  = Number of Respondents' Samples

$\sum n \text{ Real}$  = Number of Samples answered with the answer "Yes"

To analyze questionnaire data, the data that has been indicated is then determined by the percentage of the overall questionnaire by grouping the data based on the type of statement, namely positive statements, and negative statements, then the results are interpreted using the percentage category based on the criteria for assessing constraints on subsidized fertilizer distribution.

Table 5. Criteria for assessing constraints on the distribution of subsidized fertilizers

Percentage of Answers "Yes":	Criteria
100 %	There are no obstacles.
80 - 99 %	Low
70 - 79 %	Medium.
60 - 69 %	High

### 3. RESULT AND DISCUSSION

The Highest Retail Price (HRP) of Subsidized Fertilizer for the Agricultural Sector has been stipulated by the government in the Regulation of the Minister of Agriculture Number 49 of 2020 (Table 6).

Table 6. Highest Retail Price (HRP) for subsidized fertilizers in the agricultural sector Fiscal Year 2021.

Type of Fertilizer	Price		Packaging
	(IDR/Kg)	(IDR/Zak)	
Urea	2.250	112.500	50 kg/zak
SP-36	2.400	120.000	50 kg/zak
ZA	1.700	85.000	50 kg/zak
NPK	2.300	115.000	50 kg/zak
NPK Special Formula	3.300	165.000	50 kg/zak
Organic Granule	800	32.000	40 kg/zak
Organic Liquid	20.000	20.000	1 l/Bottle

Source: Regulation of the Minister of Agriculture Number: 49 of 2020 concerning Allocation and HRP of Subsidized Fertilizers in the Agricultural Sector for the fiscal year 2021.

NPK subsidized fertilizer is the highest price compared to other subsidized fertilizers (Table 6). The Highest Retail Price (HRP) of subsidized fertilizer applies to the purchase of fertilizer per package in cash at the official retailer kiosk in Line IV, where subsidized fertilizer packaging is following the Regulation of the Minister of Industry No. 16/M-IND/PER/3/2013 concerning Substation Fertilizer Coloring, and Regulation of the Minister of Industry No. 59 of 2019 concerning Substation Fertilizer Coloring, and Regulation of the Minister of Industry No. 59 of 2019 Amendment to the Regulation of the Minister of Industry



Number 69 /M-IND/PER/8/2015 concerning the Use of One Brand Kantong For Subsidized Fertilizers.

Subsidized fertilizer is a government program that aims to increase the productivity of crops consisting of urea fertilizer, SP.36, ZA, NPK, and Organic, which produce inorganic fertilizers and organic fertilizers. who are members of the association of PT Pupuk Indonesia.

PT Pupuk Indonesia is a Fertilizer Subsidy Implementer who has the duty and authority to carry out the procurement and distribution of subsidized fertilizer through producers, distributors, and retailers according to the division of their respective responsibility areas so that the distribution of subsidized fertilizers can run flexibly, effectively and efficiently. Distributors are individual companies or business entities either in the form of legal entities appointed by the Manufacturer based on the Letter of Sale and Purchase Agreement (SPJB) to make purchases, storage, distribution, and sale of subsidized fertilizer in major parties in their areas of responsibility. Authorized retailers are distributors in Line-IV following the provisions of the Minister of Trade on the procurement and distribution of subsidized fertilizers in the agricultural sector

Procurement and distribution of subsidized fertilizer are carried out by the manufacturer to authorized distributors who have been appointed according to their working area. Furthermore, the distributor distributes to authorized retailers, which will then be distributed by official retailers to farmers/farmer groups located in their working areas. Manufacturers, distributors, and retailers are obliged to guarantee the availability of subsidized fertilizer in the work area of their responsibility according to the established allocation.

The implementation of fertilizer distribution in 2020 is based on the Decree of the Director-General of Infrastructure and Agricultural Facilities Number 11 / KPTS / SRC.310 / B / 03/2020 concerning Technical Guidelines for the Provision and Distribution of Subsidized Fertilizers TA. 2020, while the distribution of fertilizer distribution in 2021 is based on the Decree of the Director-General of Infrastructure and Agricultural Facilities, Ministry of Agriculture of the Republic Number: 01/Kpts/RC.210/B/01/2021 concerning Technical Guidelines for Subsidized Fertilizer Management Fiscal Year 2021.

That the number of fertilizer needs provided as stated in e-RDKK is different from the allocation of fertilizer provided by the government. This is due to the limited ability of the government to make payments to producers. Therefore, to ensure the fulfillment of subsidized fertilizer needs, fertilizer distribution must be carried out proportionally according to the e-RDKK that has been prepared by the farmer group accompanied by the accompanying extension and allocation that has been provided. The allocation of subsidized fertilizers for the agricultural sector in the fiscal year 2021, can be seen in Table 7.

Table 7. Allocation of subsidized wages for the agricultural sector in the fiscal year 2021 in OKU Regency

Types of Fertilizers	Allocation (Ton)
Urea	7.398
SP 36	1989,8
ZA	258
NPK	4.795
Organic Granule	197
Organic Liquid	448

Based on Table 7, Urea subsidy fertilizer allocation is highest compared to other subsidized fertilizers. The distribution of subsidized fertilizer from producers to farmers must be following six principles precisely, the name right type, the right quantity, the right price, the right place, timely, and right quality. The scarcity of fertilizer experienced by farmers/farmer groups over the past few years due to the unmet number of subsidized fertilizers needs to be listed in the e-RDKK compared to the allocation from the government, and there are still farmers who are not registered with e-RDKK.

One of the alleged acts of deviation that occurred in Ogan Komering Ulu Regency is 1). Harga fertilizer exceeds the Highest Retail Price (HRP) for example the government has set one price from producers to farmers for the price of Urea fertilizer packaging of 50 kg, which is IDR.112. 500,-/zak, but by the kiosk the retailer sells for IDR. 125,000,-/zak - IDR. 130,000,-/zak with the difference in price for transportation and loading and unloading costs. The farmer who are not registered in-RDKK still get subsidized fertilizer and 3). Farmers whose farmland is more than 2 hectares still get subsidized fertilizer, 4). The sale of subsidized fertilizer outside the working area of the kiosk that is not entitled, 5). Farmers have difficulty finding subsidized fertilizer.

Condition like this must be followed up so that there are no more individuals who make irregularities in the distribution of subsidized fertilizer in Ogan Komering Ulu Regency through optimal supervision carried out by the Fertilizer and Pesticide Supervision Commission (KPPP) both at the provincial and district levels.

The Fertilizer and Pesticide Supervisory Commission (KPPP) is a coordination forum for relevant agencies in the supervision of fertilizers and pesticides established by the Minister of Agriculture for the Center, the Governor for the Provincial level, and by the Regent / Mayor for the Regency / City level. In terms of supervision of subsidized fertilizer KPPP as a coordination container still has some weaknesses in terms of regulation, first is the definition that sometimes relatively complicates the space of movement of KPPP in optimizing the supervision function of subdivided fertilizers. Second, in terms of the authority of the KPPP as a coordination forum does not yet have the authority regulated in the laws and regulations, but the existing one is the fertilizer supervisor (subject). Third, KPPP as a coordination container has a fairly "flat" structure, although it is not a guarantee that a container can function optimally in carrying out supervisory functions [21].

The results of the study of Ref. [16] found that the Effectiveness of the Implementation of the Subsidized Fertilizer Distribution Policy in the Nunukan Regency is still low (Less Effective).

The results of the study of Ref. [17] found that the implementation of subsidized fertilizer distribution in Sambaliung District is still ineffective, especially in local places, quantities, and prices.

The results of the study by Ref. [18] found that based on the four indicators, three indicators, namely type indicators, time and number can be categorized as effective, while for the right indicators the price cannot be categorized as effective.

The results of the study by Ref. [19] found that the impact of scarcity that occurred in Montasik Subdistrict caused the inappropriate amount of subsidized fertilizer available.



Ref. [7] argues that the evaluation of subsidized fertilizer distribution system policies is traced from several aspects, namely: (1) the effectiveness of HRP and the factors that affect it, (2) the impact of the increase in fertilizer HRP on agricultural business profits, (3) the ability of farmers to pay fertilizer prices above HRP, (4) the volume of subsidized fertilizers, (5) the amount of fertilizer subsidy value, and (6) the design of fertilizer distribution systems.

Based on Table 8. the distribution of subsidized fertilizer in 2021 did not reach 100%, the lowest occurred in urea fertilizer type of 83.76% due to the low purchasing power of farmers due to the impact of the Covid 19 pandemic.

Table 8. Distribution of subsidized fertilizer for the agricultural sector in the fiscal year 2021 in Ogan Komering Ulu Regency

Fertilizer	Allocation (ton)	Realization (ton)	Percentage
UREA	7,398	6,189.8	83.76
SP 36	1.989,8	1,849.8	92.96
ZA	258	243	94.19
NPK	4,795	4,662.15	97.23
Organic Granular	197	183.20	92.99
Organic Liquid	448	0	0

Source: Ogan Komering Ulu District Agricultural Office, 2021

#### 4. CONCLUSION

The implementation of subsidized fertilizer distribution at the research site, namely Ogan Komering Ulu Regency, especially in Lengkiti District, East Baturaja District, and Sosoh Buay Rayap District has been carried out following the implementation instructions that have been set. But there are still problems that occur such as the Highest Retail Price (HRP) and the use of Farmer Cards that have not been implemented in the field. Fertilizer subsidy policies are measured in six precise indicators, namely type, quantity, price, place, time, and quality. Based on the six precise indicators, 2 indicators of precise place and quality are categorized very precisely / according to rule, while for 2 indicators of the precise type and the right number can be categorized appropriately / not following the rule. For timely indicators can be categorized as inappropriate / not following the rules, while the right price indicators for fertilizer subsidy policies can be categorized as inappropriate / not following the rules due to the problem of price gaps in subsidized fertilizers in farmers, Line III (distributors) sell subsidized fertilizers above HRP to Line IV (official kiosks) because there are additional transportation and loading and unloading costs and purchases with the pay system after harvest. Thus causing retailers to also sell subsidized fertilizer to farmers above HRP. The government must improve the mechanism for distributing fertilizer subsidies, this improvement is mainly concerning the right price where fertilizer subsidies should be closer to the target or target of subsidized fertilizer recipients. Improvement of the distribution mechanism is importantly related to the existence of prices that are not following HRP due to the problem of price gaps in subsidized fertilizers in farmers, Line III (distributors) and Line IV (official kiosks). Extensionists must provide information about subsidized fertilizers so as not to be tricked by official retailers and always accompany farmers in compiling RDKK. Increased supervision of the distribution of subdivided fertilizers

by related institutions. The government can immediately implement the Farmer Card program by intensifying cross-sectoral coordination starting from the central government to the district/city-regional government.

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