FACTORS AFFECTING TO THE DECISION MAKING TO PURCHASE OF FERTILIZERS CONSUMERS IN THAILAND

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Abstract: The objectives of this research were: (1) to study the opinion about marketing mix of fertilizers consumers in Thailand. (2) To study the opinion of decision making to purchase of fertilizers consumers in Thailand. (3) To study marketing mix affecting to decision making to purchase of fertilizers consumers in Thailand. This research was quantitative research. The population is Thai consumers who purchase fertilizers is unknown. The sample group consisted of 400 people. Using a convenient random sampling. The tool used to collect data is a questionnaire. The statistics used in the analysis were frequency, percentage mean and standard deviation. And the statistical multiple linear regression analysis used in the testing.

Major Findings: (1) Respondents' opinions about the overall marketing mix were at a high level. (2) Respondents' opinions regarding the overall decision to purchase fertilizer in Thailand were at a high level. (3) Marketing mix factors affect the decision to purchase fertilizer in Thailand.

Keywords: Decision Making; Marketing Mix (7P); Fertilizers

1. Introduction

In the past two decades, Thailand's agricultural sector has consistently contributed around 8% to the GDP, with an annual total output of approximately 1.5 trillion baht. The Director of the International Trade Research Center at the Thai Chamber of Commerce University recently expressed serious concerns about the sustainable development of Thailand's agricultural economy. This concern arises from the global fertilizer crisis triggered by the Russia-Ukraine conflict over the past year and the sharp rise in labor costs for agricultural operations, adding increased pressure on Thai farmers' critical production costs.

During the prolonged Russia-Ukraine conflict, Thai farmers experienced a substantial increase in fertilizer expenses, exceeding 700 billion baht compared to the 2021 expenditure of 130 billion baht. Concurrently, the retail prices of fertilizers in Thailand more than doubled. Official data reveals that in 2022, Thailand imported 4.2 million tons of fertilizer raw materials and finished products, valued at 103 billion baht, contrasting sharply with the figures from a year ago, which were 5.67 million tons and 74.5 billion baht, respectively. The usage of fertilizers varies across crops, with rice cultivation being the largest consumer at 41%, followed by rubber at 28%, palm oil at 12%, sugarcane at 7%, feed corn at 7%, and pineapple at 5%. In the first quarter of this year, Thailand imported 783,000 tons of fertilizer, marking a 17.15% YoY increase in volume and an 11.88% increase in value, amounting to 14.409 billion baht. While global fertilizer prices have maintained relative stability this year, they remain high compared to the norm. For instance, the price of 21-0-0 compound fertilizer increased from 6,600 baht per ton in March 2021 to 16,400 baht in 2022, subsequently decreasing to 14,200 baht in 2023. Additionally, the price range for 46-0-0 compound fertilizer fluctuated between 11,700 baht and 28,000 baht per ton, while the price for 0-0-60 compound fertilizer ranged from 11,800 baht to 33,625 baht per ton. It is anticipated that Thailand's total fertilizer imports for the current year will fall within the range of 4 to 5 million tons. Notably, urea, a crucial component, is predominantly imported from the Middle East, with 52% from Saudi Arabia, 26% from Qatar, and 6% from the UAE. Phosphate ammonium, another significant fertilizer, primarily comes from China (82%), Saudi Arabia (14%), and Russia (3%). Potassium sulfate, a key element in fertilizers, is mainly sourced from Canada (46%), Belarus (26%), Germany (20%), and Israel (8%). (Bangkok Post, 2022).

In the face of rising global raw material prices, which contribute to the continuous price hike of fertilizers and other commodities, the Ministry of Internal Trade understands the situation. Balancing the interests of various stakeholders, including producers, traders, farmers, and end consumers, is essential to minimize adverse effects. Conversely, if price adjustments are not allowed, hindering fertilizer production and imports may lead to shortages, ultimately affecting farmers. As Thailand expands its cultivated land to meet the demands of becoming the "world's kitchen," many countries, including India, emphasize food security. For instance, India has banned the export of white rice and increased fertilizer imports significantly. The World Bank estimates that the average prices of urea fertilizer will range from $600 to $650 per ton in 2023 and 2024, while diammonium phosphate (DAP) will average $650 to $750 per ton, and potassium chloride (MOP) will average $479 to $500 per ton. While Thailand may explore alternative sources for fertilizer imports, it remains primarily dependent on its existing markets in the Middle East and neighboring countries.

In conclusion, the factors influencing the decision-making process for fertilizer purchases by consumers in Thailand are multifaceted. The ongoing global challenges, especially the Russia-Ukraine conflict, have significantly impacted the country's agriculture, with the government implementing measures to mitigate the effects on farmers and maintain a stable agricultural sector. Balancing the interests of various stakeholders and addressing uncertainties in the global market are crucial considerations for Thailand's agricultural policy formulation.

Research objectives

1. To study the opinion about marketing mix of fertilizers consumers in Thailand.
2. To study the opinion of decision making to purchase of fertilizers consumers in Thailand.
3. To study marketing mix affecting to decision making to purchase of fertilizers consumers in Thailand.

2. Literature Review

2.1 The topic in this research is Factors affecting to the decision making to purchase of fertilizers consumers in Thailand. Making the research results useful and achieving the established literature review is divided into 5 parts:

1. Theory of Marketing mix (7P)
2. Theory of the Demographic
3. Theory of the Decision Making
4. Fertilizer in Thailand
5. Related Research

Theory of marketing mix

Payne (1993) stated that many marketing experts have criticized the traditional 4Ps marketing mix that consists of product, price, distribution channels. Sales and marketing communications It is not appropriate and does not cover the use of the service because the service is generally It is different from ordinary products and a new concept has been proposed in the matter. “Service marketing mix” came up. Specifically, the service marketing mix must consist of: The traditional marketing mix is the 4Ps: product, price, distribution channel, and marketing promotion. together with 3 additional components, namely personnel, physical evidence, and processes. And because of that service It has special characteristics that are different from ordinary products, that is, service is the end product. Can't do it and don't have an idea. Other than this, the service depends mainly on time. Therefore, the service marketing mix will have additional elements from the general product marketing mix. It will consist of 7 components that are ingredients as follows (Kotler and Keller, 2016; Armstrong and Kotler, 2014)

1. Product refers to goods and services consisting of main products and supplementary products, which demonstrate the benefits that customers want. To create a competitive advantage that responds to the satisfaction of customers and service users
2. Price refers to expenses whether in the form of money and time. This includes any attempts made to purchase and use the Services.
3. Distribution channel (Place) means deciding how to deliver services to When and how long does it take to deliver the service to the customer? Where and how is it delivered? This is the distribution channel. physical or

electronic
4. Marketing promotion (Promotion) refers to the activity of designing incentives and marketing communications to create satisfaction with customers for any type of service business.
5. Personnel (People) refers to all personnel factors that participate together in service delivery activities that will affect the perception of service quality by customers. Here personnel will be included not only the personnel of that business. but also includes service users and other customers. Also gathered in the service location are service businesses that can be successful. Success will require effort to plan both the personnel and the workforce. Recruitment, selection of personnel and Training, development and motivation for all relevant employees.
6. Physical evidence refers to the location and environment. Including various components that can be completed Must have facilities and amenities that are convenient for the people. operations and customers who use the service, including helping to communicate the service so that customers are aware of the quality of the service It is also concrete.
7. Process (Process) refers to the necessary process steps. knowledge in working and providing services to customers, including methods for creating and delivering products The product must be based on design and implementation. following an effective process that is relevant to in the field of production and offering such services to users

In addition to defining the 7Ps marketing mix from the entrepreneur's point of view, the price is still reasonable. Consider the marketing mix from the perspective of customers or users of that service as well. The service marketing mix from the point of view of customers that must respond to those needs is as follows (Chusakadidet Kriangkraikul et al., 2003 :116)

1. Value that customers receive (Customer Value) means that service users compare the benefits they receive with the money they have to lose or spend in purchasing that service. Because of this, the An enterprise or business should offer services that can respond to the specific needs of those customers.
2. Cost to Customer refers to the amount of money that the customer spends to purchase any service which is considered to be the customer's cost. Customers will have higher expectations of that service if they pay a high price for the service.
3. Convenience means that the business must deliver convenience to customers who purchase and use services, such as delivering services to the location where the customers live. This can be done in the event that the customer is not comfortable traveling to receive service at that service location.
4. Communication (Communication) means giving information. News information in various fields for customers must be complete and accurate. Must act quickly, so the business must use media that is appropriate and matches the target group that wants to use the service. The objective is to provide information and respond to customers. Including receiving information from customers.
5. Caring: Customers who come to receive services need care and attention from service providers. If there is care, If done well, it will result in customers returning to use the service again, including word of mouth (words of mouth) to those close to them as well.
6. Success in responding to needs (Completion) means that customers want completeness in getting their needs met when they receive them. The service provider and the customer are not interested in the process. When providing services to the business will be difficult. How complicated is it? Customers only care about how they get a response and is it complete yet?
7. Comfort refers to the environment and the place where one must sleep. Help create comfort for service recipients, such as the back of the building, signposts, restrooms, walkways, and other convenient facilities, etc.

Theory of the Demographic

Personal factors It includes age, gender, family size, family status, income, occupation, education. These are commonly used criteria for market segmentation. Demographic characteristics are important characteristics and measurable statistics of a population that help define a target market and are easier to measure than other variables. Important personal factor variables are as follows (Siriwan Serirat et al., 1995)

1) Age: Because products can meet the needs of consumers of different ages, marketers take advantage of age as a factor. Considering the different personal factors of the market segment, marketers research the needs of the niche market, focusing on the importance of that age market.

2) Gender (sex) is an important market segmentation variable as well. Marketers must study it. Make this change carefully. Because nowadays gender variables have changed in consumption behavior. Such changes
3) Family characteristics (marital status) Historically and until present, family characteristics have always been an important target of marketing efforts, and have become even more important in relation to In front of the consumer page, marketers will be interested in selling The number and characteristics of people in the household who use a particular product. and is also interested in considering personal factors and media structures related to those household decision making to help develop appropriate marketing strategies
4) Income, education and occupation are important variables in determining market segment. Marketers are generally interested in wealthy consumers. However, low-income families represent a large market. The key problem in segmenting the market based on income alone is that income is an indicator of the presence or absence of ability. Paying for products at the same time as choosing the actual products may be based on lifestyle criteria, tastes, values, occupation, education, etc., even if the income is This is a very commonly used variable. Most marketers link gross income criteria with demographic or other variables to more clearly define the target market. For example, an income group might be Related to age and occupation criteria, Kansuan Adul Jaturongkul (2001) explained personal factors including age, gender, family life cycle, education, income, etc. Such factors are important. It is important to marketers because it relates to demand for all products. Changes in personal factors point to the emergence of new markets. and other markets will disappear or reduce their importance. Important personal factors are as follows:

1) Personal factors of age Marketers must also consider the importance of demographic changes in terms of age factors.
2) Personal factors regarding gender: The number of women who are married or single who work outside the home is constantly increasing, which marketers must consider. Consider that today women are the major buyers, whereas in the past sellers were the person who decides to buy
3) Personal factors in the family life cycle Each stage of the family life cycle is Important determinants of behavior The family life cycle is divided into nine stages, each of which has different purchasing behaviors.
4) Personal factors of education and income Education influences income. Knowing what happens to education and income is important because spending patterns depend on how much income people have.
Therefore, the characteristics of the population that are different will affect the behavior of choosing products through different distribution centers. In this study, we chose to study the characteristics of the sample group using the concept of Adul Chaturongkul (2001) who determined the factors for Personal information is divided into 4 characteristics, consisting of gender, age, education level, and marital status.

Theory of the Decision Making

Office of the National Education Commission (2013) Decision-making refers to the action of a person choosing among several alternatives by gathering and evaluating information and other important factors. J by choosing the best alternative. Only one choice can satisfy the goals or needs of the chooser. To be a guideline for practice. Natthaphan Khecharanan (2015) has given the meaning that decision making means the process of using thoughts and actions. The knowledge of awareness by studying and analyzing problems or opportunities and evaluating appropriate options to deal with problems or opportunities that arise.

Many scholars have explained decision theory. which has the following details:

1) Theory of the structure of social action (Jiralak Ritthideyothin, 2001) outlines a framework called analytical realism as a guideline for creating sociological theory. He used this framework to build his theory of the structure of social action. In addition, this framework includes the basis for vountaristicism about the nature of social reality. It is the center of principles and principles from utilitarianism, positivism and idealism. From this theory, Parsons created the functional theory of social organization, which in the first step relied on Voluntarism looks at the decisions of social actors who will make decisions. The act of doing something freely within the rules (normative constraints) and situation (situational constraintsaction). Therefore, the act is completed or voluntary. (voluntaristic) consists of the following reasons:

1.1 The doer means an individual.
1.2. Goals are what the doer intends.

1.3. Various methods that actors will choose to use to achieve their goals.
1.4 The situation which is the scene which the actor must take into consideration in choosing one method to achieve the goal.
1.5 Normative determinants include values, social norms, and various ideas that actors must take into account when choosing methods to achieve goals.
1.6 Free decision-making under regulatory or normative conditions and circumstances.

From the above theory, it can be concluded that a person's decision There must be an intention to determine what happens within the mind. and set it as a goal which must search for various methods to achieve the goal The method may be influenced by internal factors and external factors that limit the selection of methods to reach the goal.

2)Social action theory Reeder (Reeder, 1971, pp. 4-5) has studied and compiled various social theories to explain various human behaviors, generally the social psychology model (social psychology) that involves deciding how to display human behavior Most sociologists look at social economics status, which is considered to be External factors affecting decision making, but the reader believes that A person's decision to choose a behavior is made up of a combination of beliefs and disbeliefs. That is, a person may exhibit the same behavior. But the reason why the factors that cause decision making may be different. Reeder's social action theory divides factors into 3 types: Pull factors include:
2.1 Goals or objectives (goals) are things that the doer Whatever is desired to occur from the action by the doer, the goal will be set in advance. and will try to do We will do whatever we can to achieve that goal.
2.2 Belief orientation is the thoughts, knowledge, and understanding of each person.
Individuals and what happens through beliefs will affect individual decisions and social behavior. Individuals will choose a form of behavior based on the beliefs they hold. In the actions of any society, it must rely on beliefs. always with However, will this belief affect or not? You can do that behavior.
2.3 Value standards (value standards) are things that people hold on to as an aid.
Decide and determine one's actions. Values of the doer. Social leadership is expressed through the attitude and behavior of all types of actors. Values therefore influence decision making. whereby individuals try to act in accordance with the values they hold.
2.4 Habits and customs are behavior patterns that society has set and will be passed down through tradition. If there is a violation, it will be forced without society's approval.

Fertilizer in Thailand

Fertilizer use in Thailand is in its infancy. Thailand uses a range of fertilizers, including nitrogen-based (urea), phosphorus-based (superphosphate), and potassium-based (potash) fertilizers. Organic fertilizers, such as compost and manure, are also used to improve soil fertility and sustainability.

Fertilizer Production: Thailand has several fertilizer manufacturing plants, with some of the major companies including Thai Central Chemical Public Company Limited (TCCC), Thai Chemicals & Engineering Co., Ltd. (TCE), and Chia Tai Company Limited. These companies produce various types of fertilizers to meet the diverse needs of Thai farmers.

Fertilizer Consumption: The use of chemical fertilizers started after World War II and has attained a consumption level of approximately 100,000 tons per annun. Presently all chemical fertilizers are imported. Thailand's fertilizer consumption is influenced by the types of crops grown and regional agricultural practices. Rice, sugarcane, rubber, and cassava are among the key crops that heavily depend on fertilizers for optimal growth. Farmers often follow the recommendations of the Department of Agriculture regarding fertilizer usage.

Government Policies: The Thai government has implemented policies to support the agricultural sector, including subsidies on fertilizers to make them more affordable for farmers. These policies aim to improve agricultural productivity and income for farmers.

Environmental Concerns: Excessive and improper use of chemical fertilizers can lead to environmental issues, such as soil degradation and water pollution. Sustainable farming practices, including the responsible use of fertilizers, are increasingly promoted to mitigate these concerns.

Research and Development: Thailand invests in agricultural research and development to enhance fertilizer efficiency, reduce environmental impact, and promote sustainable agriculture. Research institutions collaborate with the private sector to develop innovative fertilizer products and application techniques.

Export and Import: Thailand both exports and imports fertilizers. It exports certain types of fertilizers to neighboring countries, particularly in Southeast Asia.The country also imports specific fertilizers to meet domestic demand.

Future Challenges: Challenges facing the fertilizer industry in Thailand include ensuring efficient and sustainable fertilizer use, addressing environmental concerns, and adapting to changing climate conditions. Promoting precision agriculture and educating farmers about optimal fertilizer application methods are essential steps for the future. In conclusion, fertilizers are a vital component of Thailand's agriculture sector, supporting crop production and food security. The government, along with the private sector, plays a crucial role in promoting responsible fertilizer use and sustainable agricultural practices to address challenges and ensure the long-term viability of the industry.

Related Research

Li Xin et al. (2012) studied the issue of innovation that fertilizer companies should pay attention to when formulating brand marketing strategies. They analyzed the brand, price setting, market competition, and after-sales service of fertilizer companies. On the brand side, they emphasized the need to change the awareness of farmers and customers that imported chemical fertilizers are better than domestic fertilizers, improve product quality to change farmers' impression of domestic fertilizers, and adjust product prices based on changes in the fertilizer market, Utilize various advertising and promotion methods to compete in the market, actively establish cooperative relationships with upstream material suppliers and downstream distributors, and finally attach importance to product after-sales service, establish agricultural chemical service stations, and provide guidance services for farmers' planting.

Zhao Xueyan (2017) studied the brand communication strategy of small and medium-sized fertilizer companies with limited funds, and suggested that the company conduct different product promotions based on quarterly changes. The company's products should be promoted through banner, billboard, and mobile advertising at the dealership, which can save costs while also promoting well. She also pointed out that during the promotion process, the company should leverage its own brand characteristics and advantages, and showcase the purchasing advice and after-sales service that the company can provide in terms of customer service.

Jia Suyun (2017), from the perspective of brand promotion, proposed the "One Belt One" brand promotion Propaganda model of fertilizer, which is aimed at the mature early marketing strategy of new products of large fertilizer companies, that is, to give a small bag of samples of new products while selling old products, and implement the strategy of Product bundling of products and brands. In the later stage, when the new product receives certain recognition from customers, a separate experiential sale will be carried out to make farmers more confident and play a positive role in brand promotion.

Zhang Peng (2017) studied the role of brand positioning in fertilizer companies, pointing out that brand positioning not only meets the needs of different customer groups, but also helps the company's various brand products occupy the market in the same region. In addition, he also studied the adoption of differentiated pricing strategies for products, including differentiated pricing for the company's frontline products, in order to increase product profits and promote the company's brand image.

Yang Chunju (2018) proposed the concept of brand diversification, which allows different fertilizer brands under the company to make different strategic adjustments in their respective application fields. This not only allows each brand to develop in its own field, but also takes into account the advantages of each brand in its market, enhancing the company's influence within a certain region.

2.2 The Conceptual Framework

Definition of specific terms

Demographic actors are the socioeconomic characteristics of a population expressed statistically. These typically include such factors as age, gender, level of education, amount of income, marital status, occupation, religion, birth rate, death rate, the average size of a family, the average age at marriage etc. Marketing Mix is the set of actions, or tactics, that a company uses to promote its brand or product in the market, such as

1. product refers to the item actually being sold. The product must deliver a minimum level of performance; otherwise even the best work on the other elements of the marketing mix won't do any good.
2. Price refers to the value that is put for a product. It depends on costs of production, segment targeted, ability of the market to pay, supply - demand and a host of other direct and indirect factors.
3. Place refers to the point of sale. In every industry, catching the eye of the consumer and making it easy for her to buy it is the main aim of a good distribution or 'place' strategy. Retailers pay a premium for the right location. In fact, the mantra of a successful retail business is 'location, location, location'.
4. Promotion refers to all the activities undertaken to make the product or service known to the user and trade. This can include advertising, word of mouth, press reports, incentives, commissions and awards to the trade. It can also include consumer schemes, direct marketing, contests and prizes.
5. People refers to anyone who comes in contact with your customer, even indirectly, so make sure you're recruiting the best talent at all levels—not just in customer service and sales force.
6. Process All companies want to create a smooth, efficient and customer-friendly journey – and this can't be achieved without the right processes behind the scenes to make that happen. Understanding the steps of the customer journey
7. Physical provides tangible cues of the quality of experience that a company is offering. It can be particularly useful when a customer has not bought from the organization before and needs some reassurance, or is expected to pay for a service before it is delivered.

Decision is the process of making choices by identifying a decision, gathering information, and assessing alternative resolutions. Using a step-by-step decision-making process can help you make more deliberate, thoughtful decisions by organizing relevant information and defining alternatives. This approach increases the chances that you will choose the most satisfying alternative possible.

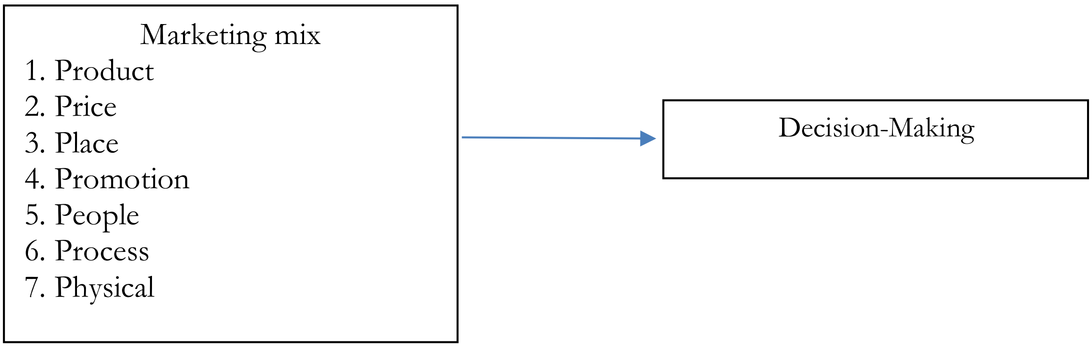

Figure 1: Research concept framework

3. Methods

Research Model: The researchers conducted the research according to the research process and quantitative research methods. This is a descriptive study by using questionnaires to collect information from population samples. The research mainly adopts the methods of literature research, interview, and questionnaire. Literature research method mainly collects scholars' previous research on this issue through the school library and network system. On this basis, the supporting data for this study are extracted. At the same time, try to avoid repeated research in the selection of research topics and research angles. On the basis of literature research, this paper puts forward the corresponding research hypotheses and constructs the research model. The interview method is mainly carried out in the pre investigation stage. Through in-depth interviews with the respondents, understand the shortcomings of the original questionnaire, and modify individual items in the questionnaire.

The population studied in this study were Thai fertilizer companies and Thai consumers From July 1, 2023 to December 31, 2023. The sample group in the study was random Sampling customers in Thailand Sample sizes were determined from Taro Yamane's formula (1973) at 95% confidence level and tolerances of 5% sample selection were accepted 400 total.

Descriptive statistical analysis. Part 1 of the questionnaire uses frequency, percentage, mean and Part 2 uses the mean standard deviation to describe the general information from the sample and the analysis of opinion data, independent variables and dependent variables. The criteria for interpreting the results are as follows:
When analyzing the data, the students collected all the scores to find the mean and standard deviation of the sample based on the criteria

4. Results

Research subject factors affecting to the decision making to purchase of fertilizers consumers. collecting data from 400 sample fertilizers buyers in Thailand. 370 valid questionnaires were collected. The researcher presented the results of the analysis as follows:

Demography influences consumer decisions to purchase fertilizers

The demographic analysis of the respondents' sheds light on key characteristics influencing the decision-making process for fertilizer purchases among consumers in Thailand. The predominance of female respondents, comprising 69% of the sample, and the substantial representation of individuals in the 46-55 age group at 47.25% highlight the need for targeted marketing strategies tailored to these demographic segments.

Furthermore, the educational background of a majority of respondents being elementary school or lower (55%) suggests the importance of clear and straightforward communication in marketing campaigns to effectively reach this audience. Additionally, the significant presence of respondents identifying as farmers (66.25%) emphasizes the agricultural context in which fertilizer purchasing decisions are made, pointing to the significance of aligning marketing efforts with the needs and preferences of this key demographic.

The revelation that a considerable percentage of respondents reported a monthly income below 10,000 Thai baht (26.75%) underscores the economic considerations influencing purchasing decisions. This highlights the necessity for pricing strategies that accommodate varying income levels within the consumer base.

In conclusion, understanding the demographic profile of fertilizer consumers in Thailand is essential for formulating targeted and effective marketing approaches. Tailoring strategies to resonate with the predominant female, middle-aged, lower-educated, and primarily farming demographic, while considering economic factors, will enhance the success of marketing initiatives in this context.

Consumers have expressed clear opinions on product features, price levels, sales locations, promotional activities, and other aspects. For example, consumers generally believe that the marketing brand and nutritional content of a product are important factors in purchasing decisions. Consumers may hold positive or negative opinions towards certain specific brands or product lines, which may be influenced by product quality, brand awareness, and other factors.

The results of the study on the level of Marketing Mix total

Table 1. Show the number and percentage of respondents classified by marketing mix total.

Decision-Making	$\overline{X}$	S.D.	viewpoint
1.Product	4.20	1.15	Agree
2.Price	3.67	1.10	Agree
3. Place	4.21	1.14	Agree
4.Promotion	4.37	1.47	Strongly Agree
5.Personal	4.32	1.34	Agree
6.Process	4.25	1.28	Strongly Agree
7.Physical	4.05	1.03	Agree
total	**4.15**	**1.22**	Agree

The results of the study on the level of Decision to purchase products and services.

Table 2 Show the number and percentage of respondents classified by decision.

Decision-Making	$\overline{X}$	S.D.	viewpoint
There is a need for the use of fertilizers.	4.08	1.02	Agree
Use various methods and channels to search for the fertilizer you need.	4.12	1.13	Agree
Do you compare different brands or types of fertilizers when considering purchasing them.	4.43	1.45	Strongly Agree
When making purchasing decisions, you tend to rely more on your own judgment.	4.11	1.07	Agree
Will you provide feedback or comments after purchasing fertilizer?	4.24	1.21	Strongly Agree
total	**4.20**	**1.18**	Agree

5. Discussion

1. Demography influences consumer decisions to purchase fertilizers

The demographic analysis of the respondent's sheds light on key characteristics influencing the decision-making process for fertilizer purchases among consumers in Thailand. Personal factors such as gender, age, education level, occupation, and average monthly income are related to factors that affect the decision to buy products on the internet at a high level. Today's consumers have many choices. Increasingly in the search, purchase, use, evaluation and management of surplus goods and services which consumers expect to be able to satisfy their physical and mental needs. In addition to studying personal factors such as gender, age, education level, occupation, and average monthly income, one should also study family life. economic situation personality self-

concept Lifestyles include activities, opinions, and interests. It is likely that innovation and technology will take part in more changes in consumer behavior. Manufacturers and distributors must understand and prepare business strategies. market to suit consumer behavior in each period
2. Marketing Mix influences consumer decisions to purchase fertilizers

Consumers' decision-making processes when purchasing fertilizers are influenced by various factors, especially in the era of digitization. In the context of the fertilizer market in Thailand.

Trust the seller through the internet. When the seller has a good relationship with the buyer, be honest with the buyer. This will lead to the buyer's trust in the seller, thereby establishing trust in the seller. Trust on the Internet is a trading channel. Computer systems are an important medium for e-commerce. The buyer will contact the seller to purchase the product through the internet, rather than contacting the salesperson in front of the store or meeting in person. Therefore, establishing trust on the Internet includes its stability and reliability. Including understanding internet systems and payment security. Trust in business and environmental regulations. Conducting transactions through the internet poses a threat to privacy. Because the buyer must disclose some personal information Therefore, the security and confidentiality of buyer privacy are important factors in establishing trust between buyers and sellers. Consumer Protection Law.

6. Suggestions

From the research results the researcher has suggestions as follows:

1. Suggestions for applying research results

Expanding customer base by providing customized fertilizer mixtures: By investing in the technology required to analyze soil samples, operators will be able to produce fertilizers designed according to specific site requirements. This will enable manufacturers to customize fertilizers to meet the quality requirements of individual farmers, and in the process, participants will be able to add greater value to their products. In addition to helping farmers obtain products tailored to specific usage environments, such development will also support the wider adoption of smart agriculture. In addition, unlike traditional indiscriminate nutrient application, customized fertilizers are tailored to the specific needs of crops and locations, allowing farmers to simultaneously increase yields and reduce application rates. This is a highly attractive proposition as fertilizer prices may remain strong. In fact, Botargo's research suggests that using appropriate fertilizers and applying them at the right time and in the right amount can help increase yields by up to 17%. To help increase sales and reduce inventory related costs, participants may also expand their use of e-commerce distribution channels that began during the Covid-19 pandemic.

2. Suggestions for future research

We suggest that industry participants adopt a series of strategies. First, seek new fertilizer sources through diversified supply chains, such as Türkiye and Brazil, to reduce dependence on specific countries and regions and mitigate risks caused by changes in the global situation. Secondly, by improving production efficiency, including technological upgrades, employee training, and investment in renewable energy, costs can be reduced. Thirdly, deepen industry cooperation, establish information sharing platforms, collaborative procurement, and joint research and development projects to enhance cooperation within the industry. Expand export markets, especially neighboring countries, through market research and establishing strong trade relations. In terms of sustainable production practices, green certification, circular economy, and social responsibility should be considered to meet the demands of environmental protection and organic product markets. In addition, strengthen market forecasting and strategic planning, and flexibly respond to market changes through market data analysis, agile strategy, and innovation strategy. Finally, maintain close contact with the government and propose suggestions to develop more flexible price control policies, while seeking government support, especially in energy and transportation, to reduce operating costs. These suggestions aim to help Thailand's fertilizer industry improve resilience, reduce costs, and expand market share.

7. References

1. Almira Vania Puspitasari&Daniel Tumpal H Aruan.(2023). THE EFFECTS OF USER-GENERATED REVIEWS VERSUS INFLUENCER-GENERATED REVIEWS ON CONSUMER PURCHASE INTENTION.JURNAL APLIKASI MANAJEMEN,21(2),404-417.
2. Bartomiej Kabaja,Magdalena Wojnarowska,Marek wiklicki,Stefania Claudia BuffagniErica Varese.(2023).Does Environmental Labelling Still Matter? Generation Z's Purchasing Decisions.SUSTAINABILITY,15(18).
3. Bangkok Post (2022) .Thailand's fertilizer supply is sufficient to cope with the peak season of agriculture.
4. "China Supply and Marketing Cooperative (2023) .Lancang Mekong Agriculture Situation" - Thailand Chapter.
5. China International New Fertilizer Exhibition (2023) .Thailand Fertilizer Consumption and Import Data.
6. Chatyaporn, S. (2007). Marketing management. 1st Published. Bangkok, SEEDUCATION Public Company Limited.
7. Economic and Trade Window of the Consulate General in Songka
8. Fajriyatul Izzah , Yulie Wahyuningsih(2021). Marketing Strategy for Increasing Sales of Home Industry Cassava Chip Products in nggul Village, Paciran District, Lamongan Regency.
9. Harrington, R. J., Ottenbacher, M. C., &Fauser, S. (2017). QSR brand value. International Journal of Contemporary Hospitality Management , 2 9 (1), 551–570. https://doi.org/10.1108/IJCHM-06-2015-0300
10. Hanaysha, J. R. , Shaikh, M. E. A. , & Alzoubi, H. M. . (2021). Importance of marketing mix elements in determining consumer purchase decision in the retail market. International journal of service science, management, engineering, and technology(6), 12.
11. Hendarto, T., Ermaini, E., Fatmawati, E., Ismanto, W., Wibowo, T. S., & Tsai, C. H. (2023). The impact of consumer decisions in purchasing foods based on price, product design, location, and store atmosphere. Jurnal Aplikasi Manajemen, 21(2).
12. Icek Ajzen,(1991).The theory of planned behavior.Organizational Behavior and Human Decision Processes,Volume 50, Issue 2,
13. Jia Suyun. (2017)Research on the Current Situation and Countermeasures of Fertilizer Sales in Sunwu County . Jilin University.
14. Khalayleh, M & Al-Hawary, S. (2022). The impact of digital content of marketing mix on marketing performance: An experimental study at five-star hotels in Jordan.International Journal of Data and Network Science, 6(4), 1023-1032.
15. Kiki Dwi Wijayanti.(2020).The Effect of Product Quality and Promotion on Consumer Purchasing Decisions. ALMANA: JURNAL MANAJEMEN DAN BISNIS,4(2).
16. Kotler, P., & Keller, K. L. (2009). Manajemen Pemasaran. Jakarta: Penerbit Erlangga.
17. Kukanja, M., Omerzel, D. ., & Kodrič, B. (2016). Ensuring restaurant quality and guests' loyalty: an integrative model based on marketing (7P) approach. Total Quality Management & BusinessExcellence, 1–17
18. Kushwaha, G. S., & Agrawal, S. R. (2015). An Indian customer surrounding 7Ps of service marketing. Journal of Retailing and Consumer Services, 22, 85–95. https://doi.org/10.1016/j. jretconser.2014.10.006
19. Laila, N., & Jaya, B. (2019). Analisis Strategi Pemasaran dalam Upaya Meningkatkan Volume Penjualan pada PT. Titipan Kilat Banjarmasin. Jurnal Ilmiah Ekonomi Bisnis (Online). Jilid, 5, 301-311.
20. Li Xin, Chu Fengrong. (2012).Brand Marketing Strategy Analysis of Beifeng Agricultural Materials Group. Chinese and Foreign Entrepreneurs. (17): 76-77
21. Long, Nguyen H., Le Thuy Huong, and Nguyen H. Dung (2023).Influence of Green Marketing Mix on Purchase Intention of Vietnamese Consumers for Green Food.osf.
22. Narin Tunpaiboon.(2023). Industry Outlook 2023-2025: Chemical Fertilizer
23. Rong Hou,Xu Ye,Hafizah Binti Omar ZakiNor Asiah Binti Omar.(2023).Marketing Decision Support System Based on Data Mining Technology.APPLIED SCIENCES,13(7).
24. Song Yuzhong (2023) A study on the influence of brand awareness and brand image on consumer willingness to purchase fertilizers - using Taiwan Sugar Organic Fertilizer as an example
25. Thai Chinese International (2023) .Department of Commerce: Global Fertilizer Prices Decline Thai Fertilizer Crisis Clears.

26. Wang Hong (2022). Research on Marketing Mix and Influencing Factors. Modern Marketing: Part One (1), 160-162
27. Xu Qinfei, Wang Xuefeng. (2021).Research on "Beautiful Qinghai" Brand Marketing Based on Media Contact . Journal of Qinghai Normal University (Social Science)Academic Edition.
28. Yang Chunju (2018).Research on the Diversification Strategy Development of Jin Zhengda Brand. Doctoral dissertation, Northeastern Agricultural University
29. Yossy Inka Febriani&Siswahyudianto Siswahyudianto.(2022).Strategi pemasaran dalam meningkatkan jumlah penjualan pada home industry suiip desa karangrejo kabupaten tulungagung.Journal of management small and medium enterprises (sme's),15(3).
30. Zhang Peng (2017) .Research on Optimizing the Fertilizer Marketing Strategy of Kim Jong il Company.
31. Zhao Xueyan.(2017) .Research on Marketing Strategy of Jintianhua Co., Ltd. . Liaoning University of Engineering and Technology.