

Strategy for Implementation of Extension Methods and Agricultural Extension Materials on the New Normal Era in Serang Regency, Banten Province

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Abstract:- President Joko Widodo on March 24, 2020, stated that even in a pandemic, the economic sector, including agriculture, must continue to move and produce by observing health protocols. The purpose of this study was to determine the strategy for applying extension methods and agricultural extension materials in accordance with the new normal era in Serang Regency, viewed from the technical, economic, and social aspects of the institution as well as linking aspects of audience characteristics to the discussion, both on the on-farm and off-farm segments; to find out the appropriate agricultural extension model, and to determine the priority scale of the elements analyzed. The research method used is a mixed method, which combines descriptive-exploratory methods with the Analytical Hierarchy Process, supported by 37 participants located in Serang Regency. Based on the results of the analysis, the strategy for implementing extension methods and agricultural extension materials in the new normal era in Serang Regency, the priority criteria are on the technical aspects, and in terms of indicators, the main priority is the material indicators, then followed by the second priority, namely the extension method indicators. The details are as follows: In the on-farm segment, several agricultural extension materials that are suitable to be delivered in the new normal era include: technical cultivation of food crops, ornamental plants, fruit plants, biopharmaceuticals, post-harvest, fish and livestock cultivation, utilization of yards and rice fields, with the strategy of counseling methods is to continue to do face-to-face meetings, such as lectures, discussions, practice, technical guidance, field schools, pilot plots, field trips by applying health protocols; except that the distribution of learning videos, e-modules, and e-leaflets can be done through social media, or virtual learning; In the off-farm segment, several materials that are suitable to be delivered in the new normal era include: online product marketing; utilization of information technology; entrepreneurship, farming analysis, marketing and partnership growth, group planning, and health protocol materials, with strategies for implementing virtual extension methods, and several other materials that require practice to be combined with face-to-face methods; To increase the effectiveness of agricultural extension in the new normal era, it is necessary to apply an integrated model or pattern of agricultural extension involving various sectors and stakeholders; Increasing the competence of agricultural extension workers needs to be improved, in this new normal era, especially regarding: agricultural

applications; audio visual aid, agricultural mechanization; farming analysis; business partnership; urban farming; research methodology and plant breeding; problem solving, and visits to best practices.

Keywords:- *Strategy for the Implementation of Extension Methods, Agricultural Extension Materials, Agricultural Extension Competencies.*

I. INTRODUCTION

Since the occurrence of the Covid-19 pandemic some time ago and continuing with the emergence of several new variants in this new normal era, the impact has been felt on all aspects of life including weakening various sectors, starting from the emergence of public concern about the poor environmental conditions around the place of residence to the limited community movement in carrying out various activities.

In government institutions and the private sector with the implementation of various policies during the pandemic and this new normal era, habits and routine activities in the workplace have changed, starting from the application of health protocols for employees who come to work, setting the time and place of work, to reducing labor.

This condition also affects the agricultural sector, from the production process to the marketing of agricultural products which leads to a decline in the economic capacity of farmers and their families, as explained by the Ministry of Agriculture (2020) that the problems of national food security in the new normal era include, among others: Disruption of agricultural production due to restrictions on the movement of people/labor; The decline in people's purchasing power towards the demand for agricultural products; Disruption of food distribution due to the implementation of PSBB and limited area closures; Farmers are vulnerable to being exposed to Covid-19; Potential for food crisis; Threats to the availability of national food stocks sourced from imports, such as wheat, sugar, beef, garlic and soybeans.

Then Ashari (2020), explained that the decline in the number of requests for agricultural commodities in the Covid-19 pandemic era and the New Normal era was due to the imposition of restrictions on transportation and economic activities, massive layoffs that led to a decline in people's purchasing power and the cessation of social activities that required food and logistics in bulk.

However, Indonesian President Joko Widodo in his press statement on March 24, 2020 at the Merdeka Palace explained that in the atmosphere of the Covid-19 pandemic, the economic sector including agriculture must continue to move and produce, with a note not to forget to pay attention to health protocols. (<https://www.youtube.com/watch?v=K-8YoIIt2u4>).

The president's statement above is quite wise because under any conditions, including during the pandemic and the new normal, the availability of food and clothing must remain sufficient, at the same time this is an opportunity for farmers and their families to be more active in developing their farming through the development of creative ideas. in the process of production, processing and marketing of agricultural products.

Living life in the new normal era has consequences for the community/farmers as well as agricultural extension workers need to adapt them to various innovations that continue to develop, both in terms of technical farming, marketing of agricultural products, farming institutions, extension methods and extension materials.

Mosher A.T. in Krisnandhi and Samad (1991) explains that the main requirements in mobilizing and developing agriculture include: a. There is a market for agricultural products or products; b. Technology that is constantly evolving in accordance with developments, opportunities or problems encountered; c. Availability of materials and means of production locally; d. The existence of incentives (incentives) to produce for farmers or farming business actors; and e. Availability of supporting transportation.

On the explanation of Mosher A.T. above, especially in point (b), it is quite clear that in moving and developing agriculture requires technology that is constantly changing/developing in accordance with existing developments and also in accordance with the opportunities and problems faced, of course changes/developments in the use of technology occur when The community is faced with problems caused by the Covid-19 pandemic.

Saptana, Iqbal, and Ar-Rozi (2013) explain that the performance of agricultural revitalization is still facing main problems which include technical aspects, economic aspects, and social aspects or institutional.

In addition to problems from technical aspects, economic aspects, and socio-institutional aspects, other problems that are of concern to researchers are problems related to learning designs that are tailored to the characteristics and needs of targets, especially in this new normal era. Responding to the condition of participants whose backgrounds are not homogeneous, the researchers will explore them with a mixed method which will be explained in more detail in the next chapter.

The existing conditions in Serang Regency, besides being faced with the problems described above, there are also other problems as described in the Serang Regency Agricultural Regional Action Plan (2018-2021), that agency

issues that become obstacles in agricultural development include:

- Pressure on land use for the benefit of sectors outside of agriculture resulting in a decrease in the standard area of agricultural land;
- problems of natural disasters such as floods and droughts that have the potential to cause crop failure;
- Uncertainty in the price of agro inputs and products, climate change, and disturbance of plant pests/diseases.
- Lack of agricultural technology equipment, especially in production centers, which results in inefficient and ineffective farming activities;
- The low level of knowledge and skills of farmers and the weak strengthening of business capital for farmer groups;
- The quality of agricultural products has not been able to meet the increasing market demand.

On the positive aspect, Serang Regency deserves attention because most of the existing land is used as agricultural land, as data from the Serang Regency Agriculture Service (2018) that the area of agricultural land in Serang Regency reaches 116,861 ha and specifically for rice fields, the Serang Regency Government since in 2019 maintaining it at an area of 41,098 ha after previously experiencing shrinkage due to land conversion.

Serang Regency is one of the food barns in Banten Province and in Serang Regency itself its contribution to Gross Regional Domestic Product is in 3rd (10.01%) after the manufacturing and construction industries (BPS Kabupaten Serang, 2021).

Based on data in the Regional Action Plan for Agriculture in Serang Regency for 2018-2021 that from an area of 48,925 ha of paddy fields with an area of 88,611 ha of paddy per year (including an additional 542 ha of upland rice), a production of 510,747 tons of dry milled rice (GKG) was obtained or with an average productivity of 5.764 tons/ha GKG. In its management, it is supported by several related parties such as the Serang Regency Agriculture Office, Agricultural Extension Centers in 29 sub-districts, 154 agricultural extension workers, 1,948 fostered farmer groups and several other supporting parties.

In carrying out their daily activities, adult farmers, young farmers as well as women farmers with their respective groups under the guidance of agricultural extension workers work together in managing existing resources in order to increase the production of various agricultural commodities and the income of farmers and their families.

The agricultural extension workers themselves in carrying out their duties and functions are guided by agricultural extension programs and annual work plans that are prepared in a participatory, operational manner, with extension methods and extension materials that have been determined.

Based on the results of preliminary interviews with three extension workers at the Agricultural Extension Center, Ciruas District, Serang Regency, that in this new normal era, the planning of activities that have been arranged in the Extension Program and Agricultural Extension Work Plan, cannot be fully implemented and delivered due to related restrictions and obstacles. with the Covid-19 pandemic, although for extension workers in Serang Regency there is no Work from Home (WfH).

Based on data obtained from one of the Agricultural Extension Centers, namely BPP Ciruas, in 2019 before the Covid-19 pandemic occurred, farmer guidance was carried out by applying the following methods: group visits, pilot plot method/demonstration of rice/palawija/vegetable plots, field schools, demonstration methods, product marketing guidance, business partnership guidance and group institutional development. After entering the pandemic period and the new normal era, the application of these methods was not managed properly, extension workers and farmers often faced difficulties in realizing the extension schedule, because they collided with environmental conditions and the health conditions of related parties.

With the changing atmosphere in this new normal era, of course, it will change many things, and this is what inspires researchers to continue to explore the changes that occur in the implementation of agricultural extension, both related to the methods, materials and other habits. And in essence, researchers are interested in studying further about extension methods and agricultural extension materials that are in accordance with the needs of the new normal era in Serang Regency, Banten Province.

Based on the results of preliminary observations and direct questions to several agricultural extension workers in Serang Regency, several problems can be identified as follows:

- Some extension activities cannot be carried out in accordance with the plans in the extension programs and work plans made, due to the pandemic conditions that continued into the new normal era;
- Disruption of the farming production process due to the scarcity of production facilities due to the imposition of restrictions on people's movement;
- Not optimal utilization of information technology by extension workers and farmers;
- The partnership model is still partial.
- With the emergence of new variants of Covid-19, extension workers and farmers are vulnerable to exposure.

Based on the description of the background problems can be formulated as follows:

- How is the strategy for implementing extension methods and agricultural extension materials in accordance with the conditions in the new normal era in Serang Regency, in terms of technical aspects, economic aspects, and social institutional aspects, which in the discussion also relates aspects of characteristics and needs of extension targets both at on-farm and off-farm segments.
- How is the formulation of the pattern or strategy of agricultural extension in general;

- What elements are prioritized, viewed from technical aspects, economic aspects, and social institutional aspects, as well as aspects of characteristics and needs of extension targets in the discussion, both in the on-farm and off-farm segments.
- What supporting factors are related to the implementation of agricultural extension in the new normal era.

II. LITERATURE REVIEW

A. Preliminary Studies

Several studies that have relevance to this research include:

- Imran; Muhanniah; and Giono (2019). Agricultural Extension Methods in Improving Farmers' Knowledge and Skills (Case Study in Maros Baru District, Maros Regency) with the following conclusions:

"The demonstration plot agricultural extension, anjangsana, training, field schools, comparative studies and interview methods have an overall effect and significant in increasing the knowledge and skills of farmers".

The difference with the research that the author does is that it lies in the research approach, namely the author does not use a quantitative approach with the correlation method, but uses a qualitative approach with a descriptive-explorative method to find out how the existing conditions and expected conditions are regarding the strategy for implementing extension methods and the selection of agricultural extension materials. effective and in accordance with the conditions in the new normal era in Serang Regency, seen from technical aspects, agricultural economic aspects and social institutional aspects.

- Sudarmansyah et al. (2021) The Role of Agricultural Extension Officers in Supporting Food Security During the Covid-19 Pandemic Outbreak; with research conclusions as follows:
 - The role of agricultural extension workers in carrying out their extension activities during the COVID-19 pandemic is as a supporter of government program policies, motivators for farmers and facilitators in supporting farming activities.
 - The role of extension workers is more directed at efforts to maintain food security, especially rice commodities by direct extension methods and using health protocols.

The difference with the research that the author does is the focus of his research which focuses on the role of the extension worker, while the author himself focuses on the strategy of implementing extension methods and extension materials that are in accordance with the conditions in the new normal era seen from technical aspects, agricultural economic aspects and social institutional aspects.

- Kurnia S. Indraningsih, et al. (2020) Agricultural Extension in Efforts to Empower Farmers in the Era of the Covid-19 Pandemic; with research conclusions as follows:
 - The mentoring method has changed from face-to-face communication to through media (SMS, WhatsApp, telephone, zoom, and YouTube live streaming) or broadcast media, and video media for farmers who do not have mobile phones or internet access.
 - The frequency of outreach activities was immediately reduced and health protocols were implemented, namely by maintaining social distance (social distancing) that had been socialized by extension workers.
 - The interaction and social network capabilities of agricultural extension workers are utilized to assist farmers in gaining access to marketing of agricultural products.

The research that the author did was not focused on the combination of extension methods, frequency of extension and social interaction skills of extension workers, but rather on strategies for implementing extension methods and extension materials that are in accordance with conditions in the new normal era seen from technical aspects, agricultural economic aspects, and social aspects. institutional.

Based on the description of previous research, the novelty value of this research can be seen from its perspective, which is more focused on the strategy of implementing extension methods and agricultural extension materials in the new normal era, seen from technical aspects, agricultural economic aspects, and social institutional aspects, both in the on-farm segment. as well as off-farm.

B. Theoretical basis

- a) Legal Basis and History of Agricultural Extension

Regulation of the Minister for Empowerment of State Apparatus and Bureaucratic Reform number 35 of 2020 concerning Functional Positions of Agricultural Extension Officers, explains that agricultural extension is a lesson for key players and business actors so that they are willing and able to help and organize themselves in accessing market information, technology, capital, and resources. others, as an effort to increase productivity, business efficiency, income, and welfare, as well as increase awareness in the preservation of environmental functions.

The beginning of agricultural extension activities in Indonesia was since the establishment of the Botanical Garden (now Bogor Botanical Gardens) on May 18, 1817. Then in 1905 the Ministry of Agriculture was established which immediately formed the Agricultural Extension Service/Landbauw Voorlichting Dienst (Kusnadi, 2011).

Currently, the Government Agricultural Extension Institutions according to the Regulation of the Minister of Agriculture number 03 of 2018 concerning Guidelines for the Implementation of Agricultural Extension, consist of:

- Agricultural Human Resources Extension and Development Agency at the Center;
- The office that carries out the function of Agricultural Extension in the province;
- The office that carries out the function of Agricultural Extension in the regency/city area; and
- Agricultural Extension Center at the sub-district level.

The Agricultural Extension Center has the following tasks: To arrange extension programs at the sub-district level in line with district/city extension programs; Carry out counseling based on extension programs; Provide and disseminate information on technology, production facilities, financing, and markets; Facilitating institutional development and partnerships of key players and business actors; Facilitating capacity building for civil servants, self-help extension workers, and private extension workers through a continuous learning process; and Implementing a learning process through piloting and developing farming models for the main players and business actors.

Meanwhile, according to Law no. 16 of 2006 concerning the Agricultural, Fisheries and Forestry Extension System, the duties of the Agricultural, Fisheries and Forestry Extension Center, include:

- Program preparation at the sub-district level is in line with district extension programs
- Carry out counseling based on counseling programs
- Provide and disseminate technology information, production advice, financing and market
- Facilitating institutional development and partnerships of key players and business actors
- Capacity building for extension workers through continuous learning
- Implementing the learning process through piloting and developing farming models for the main players and business actors.

b) Aims of Agricultural Extension

The Ministry of Agriculture (2019) explains that the purpose of agricultural extension is the process of empowering human resources in order to produce competent agricultural development actors so that they are able to develop strong agricultural businesses, farm better (better farming), make farming more profitable (better businesses), live more prosperous (better living) and a healthier environment.

<http://cybex.pertanian.go.id/mobile/article/72802/purpose-penyuluh-pertanian/>

According to Zakaria (2006) that the short-term goal of agricultural extension is to foster changes that are more focused on farming which include: changes in knowledge, skills, attitudes and actions of farmers and their families through extension activities in the hope that farmers and their families can manage their farming productively, effective and efficient. The long-term goal is the realization of technical improvements in farming (better farming), improved farming (better business), as well as improving the lives of farmers and their families (better living).

c) Principles of Agricultural Extension

In Law Number 16 of 2006 concerning the Agricultural, Fisheries and Forestry Extension System, it is explained that agricultural extension is carried out based on the principle of democracy, the principle of benefit, the principle of equality, the principle of integration, the principle of balance, the principle of openness, the principle of cooperation, the principle of participatory, the principle of partnership, the principle of sustainability, the principle of justice, equity, and the principle of accountability.

d) Agricultural Extension Planning

Agricultural extension planning is an important aspect that needs to be prepared by an extension worker, so that the implementation of extension can take place effectively and efficiently.

In article 36 of the Regulation of the Minister of Agriculture number 03 of 2018 concerning Guidelines for the Implementation of Agricultural Extension, it is explained that the implementation of agricultural extension refers to: Agricultural Extension Programs; Agricultural Extension Materials; and Agricultural Extension Methods.

Based on the ministerial regulation, that the physical form of agricultural extension planning is in the form of an Agricultural Extension Program document which is prepared in a participatory manner every year and at each level, which consists of:

- Village/kelurahan agricultural extension program;
- District agricultural extension program;
- Regency/city agricultural extension program;
- Provincial Agricultural Extension Program; and
- National Agricultural Extension Program.

In each extension area, which usually consists of several villages/kelurahan, an Annual Agricultural Extension Work Plan is also made as an elaboration of the District Level Agricultural Extension Program managed by the District Agricultural Extension Center.

e) Agricultural Extension Method

Regulation of the Minister of Agriculture number 03 of 2018 concerning Guidelines for the Implementation of Agricultural Extension explains that the Agricultural Extension Method is a method or technique of delivering extension materials by agricultural instructors to the Main Actors (farmers/planters/breeders/fish cultivators/fishermen/communities around the forest and their immediate families); and Business Actors (managers of agriculture, fisheries, and forestry businesses) so that they know, are willing and able to help, and organize themselves in accessing market information, technology, and other resources in an effort to increase their productivity, business efficiency, income, and welfare, and increase awareness in the preservation of environmental functions.

Agricultural extension methods are determined by agricultural extension workers with reference to agricultural extension programs and agricultural extension workers' annual work plans, and need to be adapted to the needs and conditions of farmers as the main actors and business actors engaged in agriculture.

Ermina (2015) explains that the purpose of selecting extension methods is so that agricultural extension workers can determine a method or a combination of several methods that are appropriate and effective and that agricultural extension activities carried out can cause the desired changes, namely changes in the behavior of farmers and their family members.

Based on the Regulation of the Minister of Agriculture Number 52 of 2009 concerning Agricultural Extension Methods, that extension methods can be grouped into several groups as follows:

a. Extension Methods Based on Communication Techniques

Based on communication techniques, agricultural extension methods are classified as direct communication methods and indirect communication methods. Extension methods using direct communication, for example: chat in the fields, chat at the village hall, chat at home, telephone / cellphone, farming courses, field trip demonstrations, and exhibitions. Extension methods with indirect communication, for example, are publications in the form of prints, posters, radio/TV broadcasts, and film shows. So, in indirect communication activities, messages are conveyed through intermediaries (media).

- b. Extension Methods Based on Number of Targets
Based on the number of targets achieved, agricultural extension methods are grouped into three approaches, namely the individual approach, the group approach and the mass approach.
- Extension methods with individual approaches, for example: home visits, farm visits, correspondence, and telephone calls;
 - Extension methods with a group approach, for example: group discussions, demonstrations (methods or results), field trips, field meetings, business meetings, and farming courses;
 - Extension methods with a mass approach, for example: exhibitions, film screenings, rural/TV broadcasts, poster installation, banner installation, and distribution of reading materials (folders, leaflets, lptans, brochures).
- c. Counseling Method Based on the Recipient's Sense of Target
Extension methods based on the recipient's senses from the target include:
- With the sense of sight (printed materials, slides, photo albums);
 - With the sense of hearing (telephone, evening chat, tape recorder, rural broadcast);
 - With a Combination of Receiver's Senses (demonstrations of how/demonstrations of results, screenings of films, videos, television).

A person's ability to learn something is different, it is also influenced by environmental conditions, on that basis it is necessary to select the extension method and its implementation strategy so that agricultural extension is efficient and effective.

Furthermore, in the Attachment to the Regulation of the Minister of Agriculture Number 52 of 2009 it also explains the types of agricultural extension methods that can be selected, used or combined, including:

- Personal Guidance, namely planned learning guidance from a facilitator/instructor to someone (target) by visiting the target's house or place of business so that the person being guided is aware, knows, wants and is able to solve the problems they face;
- Lectures, namely the delivery of information/ideas/facts to a large number of extension participants in a relatively short time;
- Questions and Answers, which is an interaction between the facilitator/extension with extension participants to provide more understanding and understanding;
- Group Discussion, namely the process of exchanging thoughts, experiences, opinions and feelings together;
- Role Playing, namely an extension method carried out by playing the roles of situations that are in accordance with actual events and related to an activity;
- Playing Business (Business Game), is an extension method by handing over tasks to participants in the form of acting out company/organizational activities to see the potential of participants as managers;
- Case Study, which is a problem solving method based on

the experience and knowledge of the participants;

- Exercise, which is a learning process by training regularly, repeatedly and continuously until the actual understanding;
- Field School, which is an exercise model that is held directly at the target community's business location, with the duration and frequency of meetings paralleling the schedule of the instructor's visits.
- The target community learns to observe and appreciate and analyze the environmental conditions of the place of business, so that they can identify existing problems, consult to formulate alternative solutions and agree to implement them together;
- Course, is a teaching and learning process that is organized systematically with a certain curriculum and within a certain period of time;
- Workshop, which is an activity to develop individual abilities in a particular field.
- After the extension participants are provided with information, knowledge and new experiences, they are then given problems that must be reviewed and discussed together by the participants under the guidance of experts. The result of problem solving is a shared agreement between participants;
- Participatory Counseling, namely a learning process that involves various parties (stakeholders) starting from the process of identifying needs, identifying problems and potentials, formulating goals and formulating steps to achieve goals;
- Laboratory Methods, namely learning methods by first studying a problem/theory which is then carried out by testing activities (experiments);
- Field Meeting, is a meeting between the target community and researchers in the field, to convey information on research results and discuss feedback from the target community;
- Dialogue, namely a meeting between the target community and the government to discuss government policies and activities expected by the community;
- Temu Karya, which is a meeting between the target communities to exchange ideas and experiences, as well as teach each other skills;
- Business Meetings, namely meetings between the business community and entrepreneurs to promote business products, increase business enthusiasm, establish business cooperation, distribute market information and increase knowledge in the technical field of production and handling of products;
- Mimbar Saresehan, namely a communication forum between the fostered figures and the government on a periodic and continuous basis regarding the implementation of government programs and the activities of the assisted communities;
- Demonstration Method, which is an outreach method in the field to clearly demonstrate the "way" and or "results" of applying technology that has been proven to be profitable;
- Applied Studies, namely extension methods to improve the ability of extension targets, in selecting technology packages that are recommended but not yet demonstrated.

Still in the attachment to the Regulation of the Minister of Agriculture Number 52 of 2009 concerning Agricultural Extension Methods, it is explained that the considerations for selecting agricultural extension methods are based on: Stages and Target Adoption Ability; Knowledge Level, Socio-Cultural and Number of Targets; Extension Resources; Regional Conditions; and Government Policy.

The stages of adopting an innovation from the target include: the awareness stage, the interest stage, the assessment stage, the trying stage, and the stage of deciding to adopt the innovation.

Based on the target's ability to adopt innovations, they can be grouped into several groups as follows: pioneers (innovators), early adopters, early adopters, late adopters, and rejecters.

Other considerations in formulating appropriate extension methods need to pay attention to learning models 10, 20, 70, as explained by Pradana (2021) that the method used for the development of Human Resources recommended is the learning formula of 70% experiential learning, 20% social learning, and 10% formal learning.

This learning strategy with models 10, 20, 70 is thought to be very suitable for use in agricultural extension to improve the knowledge, attitudes and skills of farmers as the main actors. Relevance to the learning that has been carried out, it is more similar to the method of the rice pest control field school (SLPHT) or internship which focuses more on learning from experience.

C. Agricultural Extension Materials

Minister of Agriculture Regulation number 03 of 2018 concerning Guidelines for the Implementation of Agricultural Extension explains that agricultural extension materials are agricultural extension materials that will be delivered by extension workers to farmers as the main actors and business actors in the agricultural sector in various forms which include information, technology, social engineering, management, economics, law, and environmental sustainability.

In Regulation of the Minister of Agriculture number 03 of 2018 it is also explained that agricultural extension materials are prepared based on the needs and interests of the main actors and business actors by taking into account the benefits, sustainability of agricultural resources, and the development of agricultural areas.

Agricultural Extension Materials contain the following elements: Human resource development; Improvement of science, technology, information, economics, management, law, environmental sustainability; and Institutional Strengthening of Farmers.

Agricultural extension materials are directed at developing the capacity of key players and business actors in managing profitable farming businesses, increasing income and welfare and environmentally friendly, through increasing the professionalism and competitiveness of the

main players in the globalization of regional and international trade.

Agricultural Extension Materials are prepared by a central, provincial, and district/city drafting team consisting of at least structural officials who carry out functions in the field of agricultural extension and extension. The extension materials sourced from traditional knowledge can be prepared directly by the extension workers, but still need to be verified by the competent authorities to prevent socio-economic, environmental and public health losses.

Erwin (2015) explains that the material/message of counseling can be in the form of cognitive, affective, psychomotor and creative messages. There are also counseling messages that are recommended (persuasive), prohibited (instructive), notification (informative) and entertainment (entertainment). In technical language, extension materials are often referred to as agricultural information sourced from the experiences of successful farmers, test results/research results, market information or policies issued by the government.

Erwin (2015) also explained that several things need to be considered in the selection of extension materials, including:

- Profitable, meaning that it provides tangible benefits to the target.
- Complementary, can complement existing activities, or fill spare time in between current activities.
- Compatibility, does not conflict with the customs and culture of the community.
- Simplicity, simple easy to implement, does not require too high a skill.
- Availability, knowledge, costs and necessary facilities can be provided by the target.
- Immediate Applicability, meaning that it can be utilized and immediately provides tangible results.
- In-expensiveness, does not require additional costs that are too expensive.
- Low risk, does not have a big risk in its application.
- Spectacular impact, the impact of its application is interesting and prominent.
- Expandible, can be done in various circumstances and easily expanded in different conditions.

Agricultural material that is delivered to the target of agricultural extension, needs to be adjusted to the subsystem or segment of the farm, i.e. there is material that is delivered in the on-farm segment and some is delivered in the off-farm segment.

Bungaran Saragih (2010), explained that farming activities are divided into two segments, namely the on-farm segment which includes the cultivation activity system on farmland, and the off-farm segment which includes the upstream and downstream subsystems of cultivation activities.

f) Agricultural Extension Media

Maryke J. Van Room (2021) explains that agricultural extension media are anything that can transmit messages, can stimulate the thoughts, feelings and wills of the main actors and business actors so that they can encourage the creation of a learning process for the main actors and agricultural business actors.

Furthermore, Maryke explained that Agricultural Extension Media has a function to: Clarify the message so that it is not too verbalistic; Overcoming the limitations of space, time, energy and senses; Generating a passion for learning, more direct interaction between farmers and extension workers; Enable farmers to learn independently according to their visual, auditory & kinesthetic talents and abilities; Gives the same stimulus, equates the experience and creates the same perception.

As for the types, Maryke grouped them into three types, namely: Printed Extension Media, Audio Extension Media and Visual, Audio-Visual or Projected Extension Media.

D. Operational Definition

For a common understanding related to the aspects raised in the research, here are some descriptions of these aspects:

a) Technical Aspect

Technical aspects are aspects related to agricultural production processes that use advanced, environmentally friendly and sustainable technology in accordance with Good Agricultural Practices, starting from the preparation of production facilities, cultivation techniques, to post-harvest (Sudiarto, 2004).

b) Economic Aspect

What is meant by economic aspects in this study are aspects of agricultural extension which include aspects of production, prices of agricultural products, marketing of agricultural products, financing of farming, capital growth, and agricultural economic institutions in the extension's target area. (Yusman Syaikat; et al.. 2022).

c) Social Aspect

What is meant by the social aspect in this study is a situation that makes the community/farmers or groups of farmers move to achieve common goals. Social capital and its components become the glue that will maintain the unity of group members (Nilnal Dzunurroini, 2018).

d) Institutional Aspect

What is meant by institutional aspects in this study are extension institutions in the government environment and farmer institutions in the extension's target area. Extension institutions in this study are limited to the level of the Agricultural Extension Center at the sub-district level and the Guiding Agency at the district level; Farmer's Institutions

include farmer groups, farmer women's groups, farmer youth groups, farmer groups associations, and other supporting institutions such as farmer cooperatives, agricultural equipment and machinery service groups, production facilities kiosks and credit channeling banks for farmers.

e) Aspects of Target Characteristics and Needs

What is meant by target characteristics in this research are permanent conditions attached to agricultural extension targets, including: social status, age, gender, and relatively heterogeneous life experience.

What is meant by target needs in this research are needs related to the learning process, such as extension methods, extension materials, extension media, and problem solving around the activities of farmers and farmer groups.

f) Framework of Thinking

Based on the research background, problem formulation and literature review, the research focus is polarized on three main aspects, namely technical aspects, economic aspects, and social/institutional aspects as explained by Saptana, Muhammad Iqbal, and Ahmad Makky Ar-Rozi (2013) ; Then to sharpen the discussion of the research results, the researchers added criteria, namely aspects of character and the needs of counseling targets.

The recommendations submitted by agricultural extension workers to farmers in this new normal era are expected to have a positive impact if: from a technical aspect it is easy for farmers to do; from the economic aspect, it is quite profitable and can improve the welfare of farmers and their families; from the social/institutional aspect it is acceptable and does not conflict with the norms prevailing in society; and in accordance with the character and needs of the counseling target.

With the strategy of applying certain extension methods and selecting certain extension materials, both in the on-farm and off-farm segments, it is assumed that an effective model of extension will be obtained.

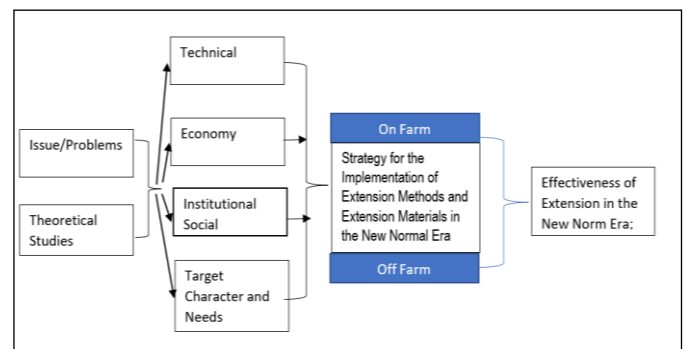


Fig. 1: Framework of Thinking Strategy for Implementation of Extension Methods and Agricultural Extension Materials in the New Normal Era in Serang Regency

III. RESEARCH MEHTODOLOGY

The approach used in this research is a mixed method approach, namely a research approach that combines qualitative methods with quantitative methods. In the early stages, the researcher used a qualitative approach with descriptive-exploratory methods with the procedures and characteristics of the research as described in the following theories:

Sugiyono (2001) explains that the descriptive research method is research conducted to determine the values of independent variables, without connecting them with other variables.

Harbani (2012) explained that the exploratory research method is open research, does not have a hypothesis, is initial research from further studies. Through exploratory research, the formulation of the problem can be clearer and more detailed.

Descriptive-exploratory research method is research that aims to describe the state of a phenomenon, in this study it is not intended to test certain hypotheses but only describes what is from a variable, symptom or situation (Arikunto, 2006)/

In the second stage of data analysis, a quantitative approach was used, using the Analytic Hierarchy Process (AHP) method to determine the priority scale of the analyzed criteria and alternatives.

The type of data used in this research is qualitative primary data, obtained from participants (agricultural extension workers and farmers) in Serang Regency; The secondary data in the form of information, tabulation of data or documents obtained from the Department of Agriculture of Serang Regency and Agricultural Extension Center at the district level in Serang Regency.

The data collection technique was carried out by sending an open questionnaire (free answers without choices) in the form of a google form to 154 agricultural extension workers in Serang Regency with the hope that at least 20% (31 people) could fill out and return the google form. The complete list of questions is as follows:

	protocols when they are on the farm or outside their routine activities? (Social/Institutional)	
4	With the development of the online marketing process for agricultural products, what creative ideas in the field of agricultural extension can you suggest? (Economy)	
5	What are the recommended technologies that are suitable to be used as counseling materials in the new normal era? (Technical)	
6	What are the strategies for implementing agricultural extension methods that are appropriate to be implemented in the new normal era? (Technical)	
7	What extension facilities/media are suitable for use in agricultural extension activities in the new normal era? (Technical)	
8	What agricultural extension materials are suitable to be conveyed to farmers in the new normal era? (Technical)	
9	In the context of strengthening farmer institutions and developing human resources in the new normal era, what can you suggest? (Social/Institutional)	
10	In the new normal era, what types of training or technical guidance are needed by agricultural extension workers? (Technical)	

Table 1: List of Questions for Agricultural Extension

Judging from the sampling technique, this study uses a purposive sampling technique, according to Sugiyono (2005) that purposive sampling is a sampling technique with certain considerations, in this case the expertise of participants, namely agricultural extension workers and farmers in accordance with their professions, are asked for their opinions on strategies application of extension methods and appropriate extension materials to be implemented in the conditions of the New Normal era.

So that the data collected can represent several points of view, the distribution of research instruments is carried out to extension workers and participating farmers in each sub-district in Serang Regency with different regional potentials (lowland agriculture, mediumland agriculture, and highland agriculture). , also with quite diverse target conditions (agricultural extension workers concurrently extension coordinator, field agricultural extension workers and agricultural extension workers based at the district level).

To strengthen the validity of research data obtained from participants, in the process of collecting and processing the data, efforts are made to comply with the principle of triangulation, namely confirming the data obtained from agricultural extension workers with data from farmers and juxtaposing it with relevant theories. For data sourced from farmers, the minimum number is not limited

No.	Question	Reference Source
1	Responding to the many victims of layoffs as a result of the Covid-19 pandemic, including family members of farmers who work in the private sector, what solutions can you suggest, especially in the agricultural sector, so that they continue to earn in this New Normal era? (Economy)	Serang Regency BPS in 2020; Minister of Agriculture Regulation No. 03 2018, Iqbal, & Makky (2013)
2	In the new normal era, what new habits need to be developed among farmers? (Social/Institutional)	
3	What efforts need to be made so that farmers are willing to apply health	

because the main data is sourced from agricultural extension workers.

The list of open-ended questions (in the form of a google form) distributed to farmers is as follows:

No.	Question	Reference Source
1	Responding to the many victims of layoffs as a result of the Covid-19 pandemic, including family members who work in the private sector, what solutions can you suggest, especially in the agricultural sector, so that they continue to earn in this New Normal era? (Economy)	Serang Regency BPS in 2020; Minister of Agriculture Regulation No. 03 2018, Iqbal, & Makky (2013)
2	In the new normal era, what new habits need to be developed among farmers? (Social/Institutional)	
3	What efforts need to be made by extension workers, so that you as farmers are willing to apply health protocols when they are on the farm or outside their routine activities? (Social/Institutional)	
4	With the development of the online marketing process for agricultural products, what kind of agricultural extension can you recommend? (Economy)	
5	What are the recommended technologies that are suitable to be used as counseling materials in the new normal era? (Technical)	
6	What are the strategies for implementing agricultural extension methods that are appropriate to be implemented in the new normal era? (Technical)	
7	What extension facilities/media are suitable for use in agricultural extension activities in the new normal era? (Technical)	
8	What agricultural extension materials are appropriate to convey to you as farmers in the new normal era? (Technical)	
9	In the context of strengthening farmer institutions and developing human resources in the new normal era, what can you suggest? (Social/Institutional)	
10	In the new normal era, what types of training or technical guidance should be given to agricultural extension workers? (Technical)	

Table 2: Questionnaire for Farmers

The research questions made in this study are based on the framework of thinking that has been formulated previously, with the main aspects in the form of technical aspects of cultivation, agricultural economic aspects and social/institutional aspects.

As for determining the aspects, the author cites the opinion of Saptana, Muhammad Iqbal, and Ahmad Makky Ar-Rozi (2013) that the performance of the implementation of agricultural revitalization still faces main problems which include technical aspects, economic aspects, and social/institutional aspects. Then for sharpening and strengthening in the discussion of research results, the researchers added criteria, namely aspects of character and the needs of counseling targets.

A. Data Analysis Technique

The data analysis technique used in this research is the mixed method, which is an analysis that combines the results of qualitative research with the results of quantitative research. Exploration of data collection was carried out qualitatively through the google form instrument, in this case the research data collected was analyzed descriptively and then generalized based on the trend direction of the opinions/suggestions of the majority of participant extension workers, participating farmers and relevant theories/expert opinions. Then interpretation, sharpening and prioritization are carried out with a quantitative approach through the use of the Analytic Hierarchy Process (AHP) method and are also associated with the characteristics and needs of extension targets, both in the on-farm segment and off-farm segment.

IV. RESULTS AND DISCUSSION

A. Profile of Serang Regency

Serang Regency is one of the district level areas located in Banten Province with an area of 1467.35 km², administratively divided into 29 sub-districts, with a total of 326 villages, inhabited by a population of 1,482,987 people with a population density of 1,011 people per year. km².

To the north it is bordered by the Java Sea, Cilegon City and Serang City; To the east it is bordered by Tangerang Regency; In the south, it is bordered by Lebak Regency and Pandeglang Regency, and in the west by Cilegon City and the Sunda Strait. Inhabited by a population of 1,482,987 people with a population density of 1,011 people per km² (BPS Kabupaten Serang, 2020).

The geographical location of Serang Regency is quite strategic because it is the gateway for land transportation between the islands of Java and Sumatra, with a distance of only ± 70 km from the city of Jakarta as the state capital, government center and business center, so it has a great opportunity to be developed into a buffer zone for the capital city.

From the topographical aspect, Serang Regency is a combination of lowland and mountainous areas with an altitude between 0 to 1,778 m above sea level, the spread of the lowlands covers the Districts of Tirtayasa, Pontang, Careng, Ciruas, Kramatwatu, and part of the Cikeusal,

Pamarayan, Kragilan, and Districts Anyar, Cinangka. Meanwhile, other districts are included in the category of hilly or highland areas (Action Plan for Agriculture District of Serang 2018-2021).

Based on data from the Agriculture Service of Serang Regency (2018) that the area of agricultural land in Serang Regency is 116,861 ha, of which 41,098 ha of which is maintained as paddy fields.

Serang Regency is one of the food barns in Banten Province and in Serang Regency itself its contribution to Gross Regional Domestic Product is in 3rd (10.01%) after the manufacturing and construction industries (BPS Serang Regency, 2021).

Based on data in the Regional Action Plan for Agriculture in Serang Regency for 2018-2021, the area of rice plants per year reaches 88,611 ha (including an additional 542 ha of upland rice), with a production of 510,747 tons of Milled Dry Grain (MDG) or with an average productivity 5,764 tons/ha MDG.

B. Agricultural Institutional Profile of Serang Regency

The Regional Apparatus Organization in charge and responsible for implementing agricultural development in Serang Regency is the Serang Regency Agriculture Service which is supported by 29 Agricultural Extension Centers (BPP) at the district level with 154 agricultural extension workers who provide guidance to 1,948 farmer groups with a total of 1,948 farmer group members. 57,394 people spread over 326 villages in 29 districts throughout Serang Regency.

C. Description of Research Results

a) Description of Research Result Technical Aspect

The answers of the participants who entered the technical aspect were about the strategy for implementing the extension method; agricultural extension facilities/media; agricultural extension materials; appropriate recommended technology in the new normal era; and types of training or technical guidance for agricultural extension workers in the new normal era.

From the 33 participant extension workers and 4 participating farmers who gave answers, the majority expressed opinions/suggestions that lead to the following:

- Agricultural extension methods that can be applied in the new normal era include: continuing to apply practical methods or pilot plots on farm land, yards or other land by applying health protocols; then the field trip method, field school and field meeting by applying health protocols;
- Several extension methods can be applied virtually, for example lecture and discussion methods.

Tahlim Sudaryanto and Sri Suharyono (2020) explained that the application of health protocols to all types of farming activities during the Covid-19 pandemic led to reduced physical contact between individuals. Therefore, strengthening online activity methods is becoming

increasingly important both in the on-farm and off-farm segments.

- Application of extension methods and selection of agricultural extension materials need to consider local economic potential;
- Agricultural extension facilities/media in their actual form such as agricultural tools/machines, seeds, fertilizers and so on can be used in the application of practical or demonstration extension methods, taking into account health protocols.

The participant's answer above is in accordance with the opinion of Ida Nuraeni (2021), which explains that the target of counseling who only gets a learning experience in the form of information or verbal messages tends to make messages/information difficult to catch, less interesting and easy to forget, unlike real experiences which are very effective. because all senses and reason are included.

Then Hasan Basri and Rusdiana (2015) explained that the strategy to improve the skills of participants, field activities became the basis for the success of the training. Practice in the field is an effective way to improve skills because many actual cases are studied.

And the connection with agricultural extension in the new normal era, as explained by Sumardjo (2020) that alternative agricultural extension strategies in the pandemic era and the new normal era need to optimize the management of local resource potential through strengthening human capital, social capital, and digital communication. Extension workers need to educate the community/farmers to implement a new normal life and be adaptive to all forms of change.

- Some counseling materials in the form of recommended technology need to be conveyed to farmers and their families in the new normal era, such as technical guidance on ornamental plant cultivation, fruits, catfish farming, goat/sheep and chicken farming.
- Extension materials that lead to the use of yards and paddy fields need to be conveyed as well, to plant useful plants such as fruit trees, biopharmaceuticals, vegetables and ornamental plants;
- It is necessary to add health protocol materials to agricultural extension materials, giving examples of the application of health protocols; and suggested that in the farmer group environment facilities for health protocols should be provided.
- Farmer families who are victims of layoffs are presented in agricultural extension activities to be given motivation and guidance;

Minister of Agriculture Syahrul Yasin Limpo (2020) explained that during the pandemic, youth and women farmer groups need to be more empowered to help meet household needs; agricultural extension workers must continue to assist farmers in producing food and ensuring their health; continue to strive to increase knowledge and form positive attitudes of farmers; innovate utilizing information technology that is available and easily accessible by rural communities as an alternative extension media.

- Development of technical training/guidance that can be developed for agricultural extension workers in the new normal era, among others: applied application training for agricultural extension workers; technical training on horticultural crop cultivation and biopharmaceuticals; technical training on plant breeding and research; export crop cultivation training; decision making and problem solving training; farming management training, entrepreneurship training and online marketing of agricultural products; technical guidance for making short films and graphic design; as well as technical guidance on the operation of agricultural tools/machines;

In relation to competency development for agricultural extension workers in the new normal era, Soleh Wahyudi (2021) explains that one of the efforts to prepare agricultural extension resources in the new normal era and era 4.0 is to provide training or technical guidance with training materials: making agricultural extension media, audio visual aid, accessing and utilizing agricultural applications and publication of agricultural information, making printed agricultural extension media and using teleconference as a communication medium for agricultural extension.

b) Description of Economic Aspect Research Results

The answers of participants who entered the agricultural economic aspect were about online marketing strategies for agricultural products, commodities that can be developed in the new normal era, counseling materials about agricultural economics and efforts to respond to the large number of family members of farmers who became victims of layoffs during the pandemic and the new normal era.

Of the 33 participant extension workers and 4 participating farmers who gave answers, the majority expressed opinions/suggestions that lead to the following:

- Extension workers need to help/facilitate and guide farmers, farmer groups, farmer group associations (gapoktan), village-owned enterprises (bumdes) and agricultural associations, so that they are willing and able to market some of their farming products online,
- The need for guidance so that farmers are willing and able to maintain the quantity, quality and continuity of their farming products in accordance with market demands, are able to apply post-harvest technology with attractive packaging according to specified standards, as well as promotion and business partnership support.
- The need for counseling and guidance on the use of information technology for farmers in promoting and marketing agricultural products online.
- In the new normal era, agricultural extension methods need to be adapted to existing conditions, namely methods that can foster motivation for farmers and their families,

including family members of farmers who are victims of layoffs,

Syukron (2021) explains that in overcoming the high unemployment rate due to the pandemic, among others, by providing knowledge and skills that can be applied where they are and adapted to the business trends of this new normal era such as products marketed online.

Then Hatiningsih (2022), stated that information technology-based platforms can be used to assist farmers in marketing agricultural commodities online. Furthermore, Rosyada (2020) explained that with the online marketing system, the reach of marketing agricultural products is getting wider, its development can be monitored from anywhere and anytime; the costs incurred are relatively small, it is easy to get business colleagues, and it is easy to get the latest information and technology.

- Agricultural commodities that are recommended to be developed in the new normal era are horticultural commodities such as vegetables, fruits and ornamental plants; then food crops such as rice, corn and soybeans; biopharmaceutical plants such as red ginger and medicinal herbs.

The Ministry of Trade (2020) stated that several agricultural products whose exports grew significantly during the pandemic included coconut and its derivative products, spices, various types of organic vegetables, guava and mangosteen.

Hatiningsih (2022), states that in this new normal era, farmers need to change their habits in growing some of their agricultural commodities, namely commodities with less demand to be replaced with commodities with better market prospects with market segments that cover all walks of life.

- The appropriate agricultural extension materials delivered in the new normal era are entrepreneurship, farming analysis and product marketing strategies in the new normal era, as well as agricultural product processing technology.

Nurmayani (2020) explained that agricultural extension materials in the new normal era need to be adapted to the changes that occur, such as changing demands and needs of consumers who prefer healthy and nutritious vegetable crops; Extension materials also need to pay attention to bottlenecks in product transportation due to mobility restrictions, extension materials must also be able to increase the insight of farmers in mastering and utilizing information and communication technology to build business partnerships and online marketing.

In relation to alternative solutions for the large number of family members of farmers who are victims of layoffs, participants provide the following opinions/suggestions:

- It is necessary to create employment opportunities with a labor-intensive model, especially for family members of farmers who are victims of layoffs.
- There needs to be support in the form of production facilities such as seeds, fertilizers, and agricultural

machinery; subsidies for farming production facilities and capital facilitation;

- It is necessary to intensively disseminate market information and control prices.

c) Description of Research Results on Social/Institutional Aspects

The answers of participants who entered the social/institutional aspect were about strengthening farmer institutions and developing human resources, new habits that need to be developed among farmers, and efforts that need to be made by extension workers so that farmers want to implement health protocols in the new normal era.

From the 33 participant extension workers and 4 participating farmers who gave answers, the majority expressed opinions/suggestions that lead to the following:

- Farmers should adjust their participation in extension activities in the new normal era, either by face-to-face or virtual methods.
- In order to strengthen farmer institutions, the strategies that need to be carried out by agricultural extension workers include: conducting group meetings on a regular basis and in stages; involving stakeholders in building group business partnerships; foster motivation and group dynamics; provide an explanation of the benefits, roles and institutional functions of farmer groups;
- One of the efforts in strengthening farmer institutions is the preparation of farmer group work plans and guidance on the realization of their activities.
- Extension workers and farmers should be disciplined in maintaining cleanliness and health, implementing health protocols, and always consuming healthy and nutritious food;
- It is necessary to develop the habit of wearing masks, washing hands, and immediately changing clothes after activities on farm land;

Kinseng (2019) explained that the concept of group/institutional resilience can be done through increasing three types of capacity, namely the capacity to overcome disturbances (coping capacity), adaptive capacity and transformative capacity.

D. Discussion of Research Results

a) Discussion of Technical Aspects

Based on the research data obtained, the technical aspects can be conveyed several conclusions and arguments as follows:

- The strategy for implementing agricultural extension methods in the new normal era in Serang Regency, still needs to apply face-to-face methods, such as the application of cultivation practice methods, pilot plot methods, field school methods and field gatherings by applying health protocols.

This is important because, due to the application of the face-to-face method with direct practice in the field (especially in the on-farm segment), the learning objectives have to reach the skillful stage, and it is hoped that the target farmers will be able to teach it back to the surrounding farmers, of course by paying attention to health protocols. . Learning directly to practice in the real world will provide a very memorable experience because many things are obtained, starting from identifying all existing conditions, discussing them in a spirit of togetherness, concluding and taking lessons, and deciding together what to do in the future.

- Several extension methods should be applied virtually/online, for example, lecture and discussion methods on plant cultivation by utilizing zoom meeting media, mass counseling through video dissemination on Instagram or WhatsApp about fish and livestock cultivation techniques, both in the on-farm and off-farm segments.

This is important because in this new normal era, counseling whose learning objectives are only to the stage of knowing or understanding, will still be effective even though it is delivered virtual/online with the prerequisite that the target of counseling understands the use of the specified digital media. The advantages of implementing this virtual/online extension method are that it can reach a wider location with more extension targets, and the health of farmers and extension workers is better maintained.

- Agricultural extension materials that are of interest to farmers in the new normal era are some practical instructions on the technical use of yards, technical utilization of rice fields, ornamental plant cultivation techniques, biopharmaceutical cultivation techniques, fruit plant cultivation techniques, fish cultivation techniques, small livestock cultivation techniques. and large livestock, materials on health protocols, and materials on food and nutrition.

This is important, because in this new normal era sometimes the supply of various agricultural products is hampered due to the implementation of various policies. People are increasingly at home, so that the use of yards, rice fields or other vacant land for gardening, raising livestock, raising fish and other needs is increasing, especially plants/fruits as sources of vitamins and minerals, plants with medicinal properties, livestock as a source of protein. animals and plants/livestock/fish that can provide a sense of calm and comfort.

- Agricultural instructor competencies that need to be developed in the new normal era include: technical training/ technical guidance on accessing and utilizing agricultural applications; technical guidance on the publication of agricultural information, technical training/ technical guidance on horticultural crop cultivation and biopharmaceuticals; technical training on plant breeding and research methodologies; technical

training on audio visual aid media; and operation of agricultural tools/machines.

This is important because in this new normal era, the demands and challenges are quite large, with the development of virtual learning, online product marketing, it needs to be balanced with the increasing competence of agricultural extension workers in terms of the use of distance learning devices (audio visual aids and the use of various applications). internet-based applications).

Increasing the competence of extension workers in terms of cultivating horticultural crops and biopharmaceuticals is also increasingly important, because in this new normal era, urban farming models are developing in society oriented to horticultural crop cultivation. As for the development of biopharmaceutical plants, because the community's need for medicinal plants is also in fact increasing.

Increasing the competence of extension workers in terms of research methodology and plant breeding is very important, because in this new normal era, creativity and innovation are needed to find solutions to various problems faced.

b) Discussion of Economic Aspects

Based on the research data obtained, on the economic aspect, several conclusions and arguments can be submitted as follows:

- The strategy for implementing the extension method needs to be directed so that farmers and other assisted groups are willing and able to market some of their farming products online through business partnership guidance, providing online product marketing materials, business meetings involving stakeholders, as well as guidance in maintaining quantity, quality and continuity. farm products in accordance with market demands.

This is important, due to the fact that in this new normal era, apart from being marketed conventionally, many agricultural products have also been marketed online with increasingly complex market demands and needs, in terms of type, quality and continuity of procurement. The government itself has directed that meeting the current market needs of agricultural products is necessary Pay attention to the principles of Good Agricultural Practices (GAP), which are essentially the application of good cultivation techniques, are environmentally friendly and safe for consumption.

- Agricultural extension materials in the new normal era need to be directed at developing agricultural commodities that have high economic potential and are in demand by consumers, such as coconut and its derivative products, organic vegetables, ornamental plants, red ginger and spices, export crop cultivation, bookkeeping and farming analysis. , entrepreneurship and marketing of agricultural products online.

This is important in the context of the community's economic recovery through the development of commodities that have high economic potential, are in demand by consumers and are widely marketed online. Some commodities also need to be developed in order to improve the health status of the community because they contain medicinal properties,

The other material is more directed at the growth of business partnerships, entrepreneurial spirit and invites the community/farmers to do farming with market conditions oriented.

In order for the delivery of extension services to be more effective from an economic point of view, it is also necessary to support the competence of the extension workers, among others, by providing them with: bookkeeping and farming analysis workshops, business partnership mentoring workshops, and technical guidance on organic vegetable cultivation.

c) Discussion of Social /Institutional Aspects

Based on the research data obtained, on the social/institutional aspect, several conclusions and arguments can be submitted as follows:

- a. Farmer group empowerment methods and materials should be adapted to the group's class level and regional potential.

This is important to increase the effectiveness of counseling, because group classes show the ability and maturity of the target group, starting from beginner, advanced, intermediate and major classes. Likewise with the potential of different regions, starting from which is dominated by rice fields such as the northern Serang area, secondary crops and vegetables in the central Serang area, and plantations in the southern Serang area.

- b. Besides being confirmed, farmer groups need to be legal entities, and have adequate organizational and administrative structures;

This is important because in the context of empowering farmer groups or other assisted groups, administrative completeness is usually used as a requirement to obtain empowerment facilities, both from the government and other interested parties.

- c. In this new normal era, it is important for extension workers to guide/facilitate farmers and farmer groups in establishing partnerships with entrepreneurs or stakeholders.

This is important because farmers with all their limitations need to receive intensive guidance from extension workers in terms of building partnerships, both with entrepreneurs, the government and other parties.

- d. The development of appropriate competencies for agricultural extension workers from the social institutional aspect is training on decision making and problem solving;

internships or visits to best practices regarding institutional strengthening of farmer groups, farmer group associations (gapoktan), women farmer groups, farmer youth groups and village owned enterprises (BUMDES).

This is important to gain insight and learning experiences for agricultural extension workers in terms of problem solving and decision making, as well as to gain lessons learned from best practices that can be adopted or modified in their target areas.

C. Results of Quantitative Research Data Analysis

To sharpen and strengthen the interpretation of research results, the following are presented the results of processing and analyzing quantitative data through the use of the Analytical Hierarchy Process (AHP) as follows:

Criteria	Technical	Economic	Social	Institutional	Weight
Indicator	0,346	0,269	0,192	0,192	
Method	0,292	0,101	0,008	0,056	0,056
Material	0,375	0,130	0,101	0,072	0,072
Media	0,125	0,043	0,034	0,024	0,024
Training	0,208	0,072	0,056	0,040	0,040
					1,000

Table 3: Recapitulation of Weights of Criteria and Alternatives (Indicators) Analysis of the Process of Application of Agricultural Extension Methods and Materials in Serang Regency.

In Table 3 above, it can be seen that the priority of the 4 criteria (aspects) analyzed is the technical aspect with a weight of 0.346 (34.60%), followed by the second priority, namely the economic aspect with a weight of 0.269 (26.90%).

Judging from the indicators, the priority is the Material indicator with a weight of 0.375 (37.50%); then the second priority is the Method indicator with a weight of 0.292 (29.2%).

In graphical form, the weights of the Criteria and Indicators can be presented as follows:

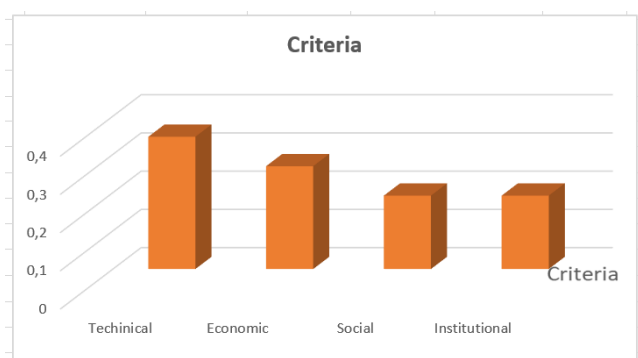


Fig. 2: Weight of Criteria for Analysis of the Process of Application of Agricultural Extension Methods and Materials in Serang Regency

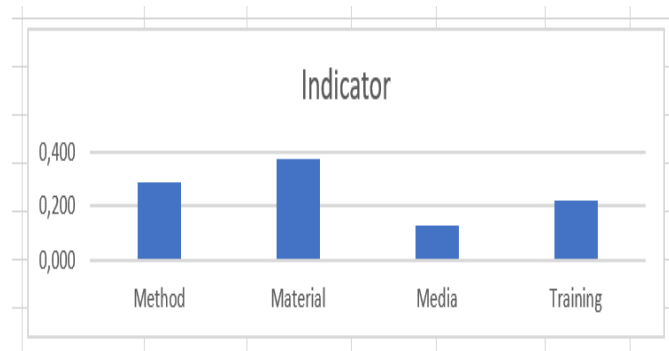


Fig. 3: Indicator Weight Analysis of the Process of Application of Agricultural Extension Methods and Materials in Serang Regency.

D. Strategy for Application of Extension Methods and Agricultural Extension Materials in Serang Regency in the New Normal Era

By utilizing the mixed method, the researcher combines the results of qualitative analysis with quantitative analysis of the Analytical Hierarchy Process (AHP) which is presented in the form of a table as follows:

No.	Material	Strategy Implementation Method
1.	<p>On Farm Segment:</p> <p>a. Technical cultivation of food crops, cultivation of ornamental plants, technical cultivation of fruits, post-harvest, technical cultivation of catfish, small livestock, large livestock, and technical cultivation of biopharmaceuticals;</p> <p>b. Technical utilization of the yard and rice field bunds;</p> <p>c. Farm management</p>	<ul style="list-style-type: none"> Face-to-face (Lectures, discussions, practice, technical guidance, field schools, pilot plots, field trips) by implementing health protocols; Video sharing on Whatsapp/ Instagram, etc. Virtual / online (zoom meeting)
2.	<p>Segmen off farm :</p> <p>a. Guidance on health protocols in agricultural extension;</p> <p>b. Guidance/facilitation of online marketing;</p> <p>c. Technical guidance on the use of information technology for farmers;</p> <p>d. Entrepreneurship, farming analysis, marketing strategy and business partnerships;</p> <p>e. Institutional Strengthening Material</p>	<ul style="list-style-type: none"> Virtual + practice Virtual + practice Virtual + practice Virtual Virtual Virtual + practice/workshop Virtual

	f. Group planning technical guidance. g. Socialization of the distribution system for farming production facilities h. Lead hours/general counseling	• Virtual
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Table 4: Results of mixed method analysis (Qualitative Analysis and AHP)

E. Strategy for the Implementation of Agricultural Extension in the New Normal Era in Serang Regency

Based on the results of data processing and analysis using a mixed method (qualitative and quantitative methods) supported by several expert opinions/references, the authors try to offer a strategy pattern for implementing agricultural extension in the new normal era in Serang Regency, Banten Province as follows:

The implementation of agricultural extension which has the ultimate goal of creating better conditions for agricultural development (better farming) both for farmers and their families, as well as for business actors in other agricultural fields; To create a better and more profitable farming business (better farming), and to create a better and more prosperous life (better living), it is necessary to build an integrated manner by involving various actors (stakeholders) in accordance with their respective duties and functions.

The Department of Agriculture as the Leading Sector, is expected to be able to become a driving force in the implementation of agricultural extension in general, make arrangements and deliver various policies; BPPT and Universities are expected to be able to contribute to creating innovations, as well as conducting trials according to specific locations and conditions in the new normal era, as well as conducting dissemination to interested parties; The Health Office can contribute in conveying its policies, conducting health promotions, as well as intensive communication, conveying various information and education related to health, nutrition and new habits for farmers and their families as well as other agricultural business actors; Education and training institutions are expected to be able to contribute in improving and developing the competence of agricultural extension workers so that it has sufficient provisions in empowering farmers and other agricultural business actors.

The agricultural extension workers who are at the forefront must be able to be adaptive, collaborative and creative in planning participatory extension services, carry out agricultural extension activities in accordance with the programs and work plans that have been prepared, evaluate the effectiveness of extension services, and carry out professional development through problem solving. various problems related to the implementation of agricultural extension, including problems related to agricultural activities in the new normal era.

Extension workers also need to be able to identify the needs of extension targets from a technical, economic and institutional perspective in the new normal era, and choose them into the on farm and off farm segments, so that it will be easier to determine the methods and media for the extension, as well as the suitability of the material to be delivered.

In schema form, it is presented as follows:

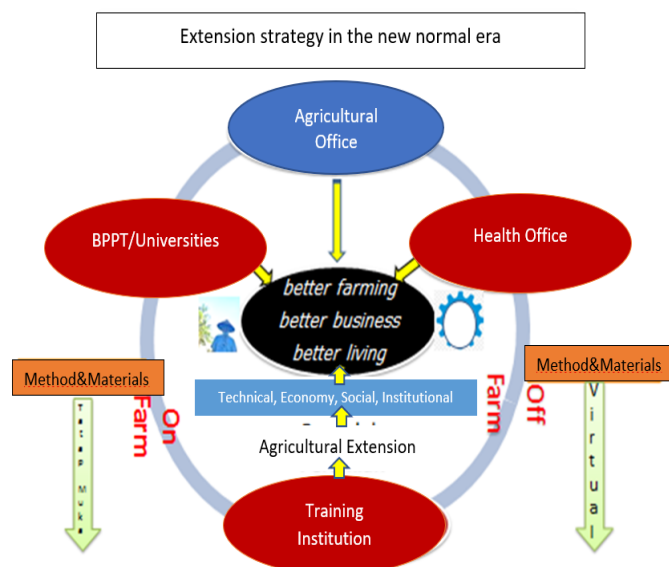


Fig. 4: Agricultural Extension Strategy in the New Normal Era

The constraints and prerequisites in carrying out the offered strategy can be explained as follows:

- a) Constraints: Obstacles that are expected to hinder the implementation of the proposed strategy include, among others: the unavailability of regulations, the unavailability of SOPs, the formation of a secretariat/implementing unit, the formulation of MoUs and Cooperation Agreements between parties.
- b) Prerequisites: The prerequisites for carrying out the offered strategy, in addition to all the obstacles that have been met, also need to pay attention to the facilities and infrastructure as well as the readiness of human resources, especially agricultural extension workers as the main actors in implementing appropriate extension methods and selecting materials that are in accordance with conditions in the new normal era.
- c) Research Limitations: Ideally, data collection in this study is carried out by census so that the discussion is more comprehensive, but limited time, resources and environmental conditions due to COVID-19 are not yet conditional, so data collection is only done through filling out an open questionnaire using the google form.

V. CONCLUSION

Based on the data and facts obtained in this study, which were analyzed using a mixed method, several conclusions can be drawn as follows:

- In the on farm segment, several agricultural extension materials that are appropriate to be delivered to targets in the new normal era in Serang Regency include: food crop cultivation techniques, ornamental plant cultivation techniques, fruit plant cultivation techniques, post-harvest techniques, cultivation techniques catfish, small livestock, large livestock, technical cultivation of biopharmaceuticals, technical utilization of yards and utilization of rice fields, with recommended extension methods such as:
 - Face-to-face (lectures, discussions, practice, technical guidance, field schools, pilot plots, field trips) by implementing health protocols;
 - Distribution of learning videos on WhatsApp /Instagram, and other social media;
 - Virtual / online meetings through the use of zoom meeting facilities or google meet.
- In the off-farm segment, several materials that are suitable to be delivered to targets in the new normal era include: Materials on health protocols in agricultural extension activities; Online product marketing technical guidance; Technical guidance on the use of information technology for farmers; Entrepreneurship technical guidance, farming analysis, marketing strategy and business partnership growth; and Group planning technical guidance, by applying extension methods which are mostly done virtually, and some other materials are still integrated with face-to-face methods (lectures, discussions and practices by applying health protocols), for example in technical guidance on group planning preparation, business meetings partnership and guidance on the use of information technology.
- Competence of agricultural extension workers that need to be improved, in the new normal era, among others: How to access, utilize and publish agricultural information on agricultural applications; Utilization of audio visual aid media in agricultural extension; Technical operational of agricultural tools/machines; Workshop on bookkeeping and farming analysis; Business partnership mentoring workshop; Technical development of urban farming; Cultivation of horticultural crops and biopharmaceuticals; Organic vegetable cultivation techniques; Research methodology and plant breeding; Problem solving and decision making (problem solving and decision making); Internships or visits to best practices regarding institutional strengthening of farmer groups and other fostered group institutions.

REFERENCES

- [1.] Anonymous. 2016. Action Plan for Serang Regency Agriculture Region 2018-2021), Serang Regency Agriculture Service.
- [2.] Anonymous. 2020. Policies and Programs of the Ministry of Agriculture in Ensuring Food Security in the New Normal Era / Covid 19 Pandemic, Ministry of Agriculture, Jakarta.
- [3.] Ashari, 2020. Agricultural Business Opportunities in the Pandemic Period and the New Normal Era. Center for Socio-Economic and Agricultural Policy. Ministry of Agriculture. Jakarta
- [4.] Basri , Hasan and Rusdiana (2015). Education and Training Management. Bandung. Faithful Library
- [5.] Dzunurroini, Nilnal. 2018. The Relationship of Social Capital with the Independence of the Makmur Farmer Group, Jugo Village, Kesamben District. Poor. Brawijaya University.
- [6.] Gadjah Mada University Press. 2020. New Normal, Socio-Economic and Political Changes Due to Covid-19.
- [7.] Hatiningsih, Suci (2022). Building Food Security in the Era of the Pandemic. Semarang. Semarang State University.
- [8.] <http://jurnal.umb.ac.id/index.php/agribis/article/view/1265>
- [9.] <http://pse.litbang.pertanian.go.id/ind/pdf/files/30-BBRC-2020-IV-2-4-KSI.pdf>
- [10.] <https://maluku.litbang.pertanian.go.id/?p=7822>
- [11.] <https://www.agrolibrary.id/buku/new-normal-change-socio-economy-dan-politics-due-covid19/>
- [12.] <https://www.semanticscholar.org/paper/Agricultural-Extension-Method-for-Improving-and-in-Imran-Muhanniah/5a08b687d7945e57f8600a10ea08841cae05d43?p2df>
- [13.] <https://www.youtube.com/watch?v=K-8YoIt2u4&t=120s>
- [14.] Independent palace. 24 March 2020. Press Release. President of the Republic of Indonesia,
- [15.] Indraningsih, Kurnia S., et al. (2020). Agricultural Extension in Efforts to Empower Farmers in the Era of the Covid-19 Pandemic Bogor: Center for Socio-Economic and Agricultural Policy.
- [16.] Kartasapoetra.A.G. 1994. Agricultural Extension Technology. Jakarta : Earth Literacy,
- [17.] Kaswan . 2016. Training and Development to Improve HR Performance. Bandung. Alpha Beta
- [18.] Kinseng, Rilus A., 2019. Social Resilience from a Sociological Perspective: Concepts and Applications in Small Fisherman Communities. LWSA Conference Series 02.
- [19.] Kompas 28 May 2020. A total of 17,298 employees in Banten experienced layoffs (PHK) due to the crisis caused by the Covid-19 pandemic
- [20.] Krisnandhi S. and Samad, Bahrin. 1991. Mobilize and Build Agriculture. Jakarta. CV. Yasaguna
- [21.] Kusnadi , Dedy. 2011. Fundamentals of Agricultural Extension: Bogor: College of Agriculture.
- [22.] Law Number 16 of 2006 concerning Agricultural, Fisheries, and Forestry Extension Systems.

- [23.] Mardikanto. T. 1993. Agricultural Development Extension. Surakarta: Eleven Maret University Press.
- [24.] Maryke J. Van Room (2021). Agricultural Extension Media. Maluku AIAT Maryono, Koesnan et al (2000). Smart Book on Forestry and Plantation Extension. Jakarta: Forestry and Plantation Extension Center.
- [25.] Muttaqin, Shukron Arif. 2021.. Overcoming Unemployment Impact of the Covid-19 Pandemic Yogyakarta. E-Parliament. DIY DPRD.
- [26.] News One, Monday, 4/10/2021. President Invites Millennial Farmers to Become Agricultural Motors. <https://www.beritasatu.com/nasional/836595/tanam-jag-di-sorong-ppresident-ajak-petani-millennial-jadi-motor-penggerak-pertanian>
- [27.] Nuraeni, Ida (2021). Agricultural Extension Media. Jakarta. University of Indonesia
- [28.] Nuriman, Andi, Muhannah, and Widiani, Bibiana Rini. 2019, Agricultural Extension Methods in Improving Farmers' Knowledge and Skills: A Case Study in Maros Baru District, Maros Regency.
- [29.] Pasolong Harbani. 2012. Public Administration Research Methods. Bandung: Alpha Beta.
- [30.] Regulation of the Minister of Agriculture Number: 52 of 2009 concerning Agricultural Extension Methods.
- [31.] Regulation of the Minister of Empowerment of State Apparatus and Bureaucratic Reform number 35 of 2020 concerning Functional Positions of Agricultural Extension Officers.
- [32.] Rosyada, Kurnia (2022). Online Marketing, Bring Farmers closer to Consumers. Jakarta. Sinar Tani tabloid. ed. 15 June 2022
- [33.] Samsudun, 2005, Basic Extension and Agricultural Modernization, Bandung. Build Creation.
- [34.] Saptana, Muhammad Iqbal, and Ar-Rozi, Ahmad Makky. 2013. Evaluation of the Seven Echoes of Revitalization Policy in Agricultural Development. Bogor. Center for Socio-Economic and Agricultural Policy.
- [35.] Saragih, Bungaran, 2010. Agribusiness. New Paradigm of Agricultural Economic Development. Bogor. IPB Press
- [36.] Setyowati Iin (2020), Extension Strategy in the New Normal Era. Attack. BPTP Banten Province
- [37.] Sudarmansyah, et al. (2021). The Role of Agricultural Extension Officers in Supporting Food Security During the Covid-19 Pandemic Outbreak. Bengkulu Agricultural Technology Study Center. Journal of AGRIBIS Vol 14. No. January 1, 2021 Pg 1598-1612
- [38.] Sudaryanto, Tahlim, Sri Suharyono (2020). Increasing the Resilience of Farmers and Farmers Against the Covid-19 Pandemic Bogor. Center for Socio-Economic and Agricultural Policy
- [39.] Sudiarto, (2004). Good Agricultural Practices. Jakarta. Agricultural Research and Development Agency.
- [40.] Sugiyono. 2005. Statistics for Research. Bandung : CV. Alpha Beta CV. Yasaguna
- [41.] Suwandana, Endan. 2022. Tacit Knowledge, Corporate University and the Future of Widyaiswara. Bekasi. Micro Media Technology
- [42.] Syaikat, Yusman; et al..(2022). Explanation of Thesis Topic for Students of Agricultural Economics, Resources and Environment Study Program. Bogor. Bogor Agricultural Institute.
- [43.] Wahyudi, Soleh. 2021. Strengthening the Kostratani Network by Utilizing Information Technology. Tapin. Binuang Agricultural Training Center
- [44.] Yogasuria, Ermina. 2015. Agricultural Extension Methods. Bandung : Lembang Agricultural Training Center
- [45.] Zakaria. 2006, Agricultural Extension Fundamentals Module: Bogor: Pusat