Corn Productivity through a Climate Change Mitigation Approach Based on Sustainable Agriculture Policy Based on Pancasila Values

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Abstract *: This study aims to analyze the strategy of increasing corn productivity through a climate change mitigation approach based on sustainable agricultural policies based on the values of Pancasila in Dompu Regency. The method used is a mixed approach with quantitative analysis through multiple linear regression and qualitative analysis to explore policy implementation, farmer behavior, and internalization of Pancasila values in agricultural practices. Data was collected through questionnaires, in-depth interviews, field observations, and secondary data from related agencies. The results of the study show that climate change mitigation, sustainable agricultural policies, Pancasila values, and farmer capacity have a positive and significant effect on corn productivity. The use of drought-resistant varieties and input subsidy support are the dominant factors in increasing production yields, while technology adoption and training participation are still relatively low. In addition, Pancasila values such as mutual cooperation, social justice, and environmental ethics have been proven to strengthen farmers' social capital which has an impact on increasing the efficiency and sustainability of farming businesses. This research produces an integrative strategy model that combines technical, policy, social, and ideological aspects as a holistic approach in sustainable agricultural development. The implications of this study emphasize the importance of synergy between the government, farmers, and stakeholders in creating a productive, adaptive, and equitable agricultural system.*

Keywords*: Climate change mitigation; Corn productivity; The value of Pancasila*

INTRODUCTION

The agricultural sector is one of the main pillars in national economic development, especially in maintaining food security and improving the welfare of rural communities (FAO, 2019; Suryana et al., 2020). In Indonesia, the role of agriculture is not only limited to the provision of food, but also a source of employment and a driver of the local economy (BPS, 2022; Arifin, 2018). Dompu Regency as one of the regions in West Nusa Tenggara Province, is known as a corn production center that has a significant contribution to national corn production (Ministry of Agriculture, 2021; Saptana et al., 2019). Corn commodities have strategic value because they function as foodstuffs, raw materials for the animal feed industry, and export commodities that have the potential to increase regional income (Shiferaw et al., 2018; Prasanna et al., 2021). However, the sustainability of corn production is currently facing increasingly complex challenges due to the inevitable global climate change (IPCC, 2021; Lobell et al., 2020).

Climate change has brought real impacts on the agricultural sector, including changes in rainfall patterns, increased air temperatures, and an increasing frequency of extreme climate events such as droughts and floods (Porter et al., 2018; Lesk et al., 2016). This condition causes uncertainty in planting patterns and decreases the productivity of crops, including corn (Ray et al., 2019). Corn plants have a high sensitivity to environmental conditions, especially in certain growth phases that require optimal water and temperature balance (Hatfield & Prueger, 2015). Incompatibility with climatic conditions can lead to decreased crop yields, increased pest and disease attacks, and decreased production quality (Deutsch et al., 2018; Rosenzweig et al., 2014). Therefore, an approach is needed that is able to anticipate and reduce the impact of climate change on the agricultural sector, especially in increasing corn productivity in a sustainable manner (Vermeulen et al., 2018).

In facing these challenges, the concept of sustainable agriculture and climate change mitigation has become very relevant to be applied (Tilman et al., 2017; Pretty et al., 2018). Sustainable agriculture emphasizes the balance between increasing production, environmental conservation, and the social well-being of farmers (FAO, 2018). This approach is not only oriented towards short-term outcomes, but also considers the sustainability of natural resources for future generations (Smith et al., 2019). In addition, climate change mitigation approaches in the agricultural sector aim to reduce the negative impacts of climate change through various strategies such as the use of climate-resilient superior varieties, efficient management of water resources, and the application of adaptive agricultural technologies (Thornton et al., 2018; Altieri et al., 2017). By integrating these two approaches, it is hoped that corn productivity can be increased without sacrificing environmental sustainability (Pretty et al., 2018).

However, in practice, increasing corn productivity in Dompu Regency still faces various complex problems (Saptana et al., 2019). One of the main problems is the low adaptation capacity of farmers to climate change (Bryan et al., 2013; Arbuckle et al., 2015). Many farmers still use conventional farming methods that are not based on climate information and modern technology (World Bank, 2020). Improper planting time, less adaptive seed use, and less optimal land management are factors that cause low productivity (Challinor et al., 2014). In addition, limited access to information, technology, and financing is also an obstacle to the implementation of sustainable agriculture (Feder et al., 2019).

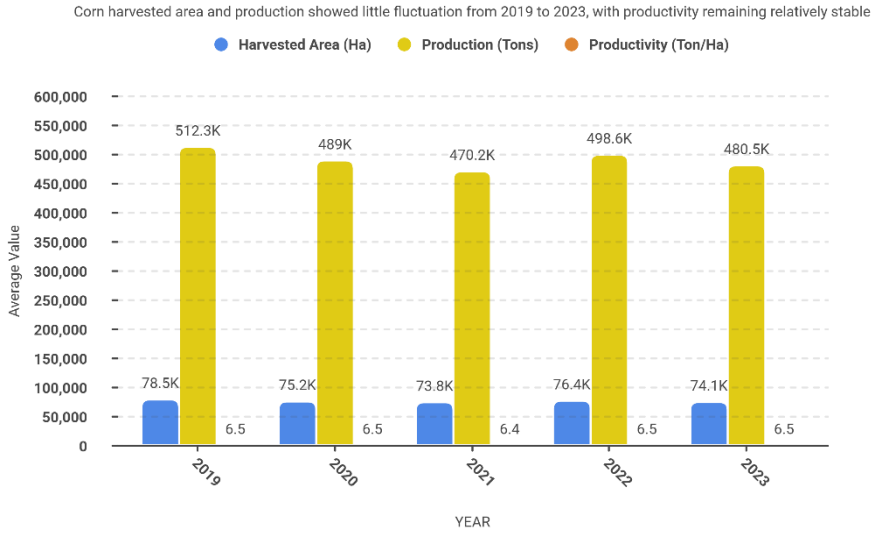

Figure 1. Development of Harvest Area and Corn Productivity in Dompu Regency

Based on Figure 1 mentioned above, it can be seen that corn productivity in Dompu Regency tends to fluctuate from year to year. Decreased productivity in certain periods can be attributed to erratic climatic conditions, such as unstable rainfall and longer periods of drought (Lesk et al., 2016). These fluctuations suggest that corn productivity is still highly vulnerable to climate change and has not been fully supported by adaptive and sustainable farming systems (Ray et al., 2019).

Another problem that is no less important is the lack of optimal agricultural policies that support integration between increasing productivity and environmental sustainability (OECD, 2020). Existing policies tend to still be oriented towards increasing production in the short term without considering the long-term impact on the environment (Pretty et al., 2018). This can lead to land degradation and decreased soil fertility (Lal, 2015). On the other hand, coordination between stakeholders is still not running effectively (FAO, 2019).

As an alternative solution, a more comprehensive and integrative approach is needed to increase corn productivity in Dompu Regency (Vermeulen et al., 2018). This approach should include technical, policy, and social aspects simultaneously (Thornton et al., 2018). From the technical side, the application of agricultural technology that is adaptive to climate change is needed, such as the use of drought-resistant varieties, efficient irrigation systems, and the use of climate information in determining planting time (Prasanna et al., 2021; Hatfield & Prueger, 2015). In terms of policy, government support is needed in the form of regulations that favor farmers, the provision of incentives, and the strengthening of agricultural institutions (Organisation for Economic Co-operation and Development, 2020; Food and Agriculture Organization, 2019). Meanwhile, from the social side, it is necessary to increase the capacity of farmers through education and training to be able to adopt sustainable agricultural practices (Feder et al., 2019).

In the context of national development, this approach needs to be based on the values of Pancasila as the ideological foundation of the nation (Latif, 2018). Pancasila values provide direction in development that is not only oriented towards economic growth, but also on social justice, community welfare, and environmental sustainability (Suryana et al., 2020). The application of divine values can be realized through moral awareness in maintaining nature as a mandate that must be preserved (Smith, et al., 2019). Humanitarian value is reflected in efforts to improve farmers' welfare and reduce social inequality (Pretty et al., 2018). The value of unity encourages cooperation between stakeholders in agricultural development (World Bank, 2020). The value of the people emphasizes the importance of the participation of farmers in decision-making, while the value of social justice demands an equitable and equitable distribution of development results (Arifin, 2018).

Although various studies have been conducted on corn productivity, climate change, and sustainable agriculture, there are still research gaps that need to be filled (Ray, et al., 2019). Most previous research has tended to focus on technical aspects such as increasing production throughput through the use of agricultural technologies or analyzing the impact of climate change on crop yields (Challinor et al., 2014). However, research that comprehensively integrates policy, social, and ideological values aspects is still very limited (Vermeulen et al., 2018). In addition, studies that specifically link Pancasila values with agricultural development strategies are also still rare (Latif, 2018), especially in the context of increasing corn productivity at the regional level.

Based on these conditions, this study offers a different approach by integrating technical aspects, policies, and values of Pancasila in one comprehensive analytical framework (Thornton et al., 2018). This approach aims not only to increase corn productivity, but also to create agricultural systems that are sustainable, equitable, and resilient to climate change (Pretty et al., 2018). Thus, this research has a significant contribution to the development of science, especially in the field of sustainable agriculture and public policy (Suryana et al., 2020).

The main objective of this study is to formulate a strategy to increase corn productivity in Dompu Regency through a climate change mitigation approach based on sustainable agricultural policies based on Pancasila values. In more detail, this study aims to identify the factors that affect corn productivity in the context of climate change, analyze the level of adoption of sustainable agricultural practices by farmers, evaluate existing agricultural policies, and formulate an integrative and applicable strategy model.

The urgency of this research is getting stronger along with the increasing threat of climate change to the agricultural sector. If not properly anticipated, climate change can lead to a decrease in corn production which has an impact on food security and economic stability of the community. In addition, the low adoption rate of sustainable agriculture indicates a gap between policy and implementation on the ground. Therefore, research is needed that is able to provide comprehensive and contextual solutions according to local conditions.

Furthermore, this research has urgency in contributing to the development of more inclusive and sustainable agricultural policies. By integrating the values of Pancasila, this research is expected to produce policy recommendations that are not only effective in increasing productivity, but also able to create social justice and maintain environmental sustainability. Thus, the results of this research are expected to be a reference for local governments, agricultural practitioners, and academics in formulating sustainable agricultural development strategies in the future.

METHODS

This study employed a mixed-methods approach combining quantitative and qualitative techniques to analyze strategies for improving maize productivity through climate change mitigation based on sustainable agricultural policies grounded in Pancasila values in Dompu Regency, Indonesia. The quantitative approach was used to examine the relationships among variables affecting maize productivity, while the qualitative approach explored policy implementation, farmer behavior, and the integration of Pancasila values in agricultural practices.

The study was conducted in Dompu Regency, a major maize-producing area vulnerable to climate variability. Primary data were collected through structured questionnaires distributed to maize farmers, in-depth interviews with agricultural extension officers and policymakers, and field observations. Secondary data were obtained from official statistics, agricultural reports, and relevant policy documents. The population consisted of maize farmers, and samples were selected using stratified random sampling. The sample size was determined using the Slovin formula:

The study involved approximately 100–150 respondents, complemented by key informants from government and farmer groups.

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

The dependent variable was maize productivity, measured by yield per hectare, land-use efficiency, and crop quality. Independent variables included climate change mitigation practices, sustainable agricultural policy support, Pancasila values, and farmer capacity. All variables were measured using a five-point Likert scale. Instrument validity and reliability were tested using Pearson correlation and Cronbach's Alpha.

Quantitative data were analyzed using multiple linear regression to assess the influence of independent variables on maize productivity, formulated as:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$$

Statistical tests included t-test, F-test, and coefficient of determination (R^2), along with classical assumption tests such as normality, multicollinearity, and heteroscedasticity. Qualitative data were analyzed using an interactive model involving data reduction, data display, and conclusion drawing.

Finally, a SWOT analysis was applied to formulate strategic recommendations by integrating technical, policy, and socio-cultural dimensions, particularly Pancasila values, to ensure sustainable and inclusive agricultural development.

RESULTS AND DISCUSSION

1. Climate Change Mitigation on Corn Productivity

Climate change is one of the main factors affecting agricultural productivity, including corn commodities in Dompu Regency. The results of the study show that climate change mitigation practices have a significant role in increasing corn productivity. Climate change mitigation in this study includes the use of superior drought-resistant varieties, efficient water management, the application of adaptive planting patterns, and the use of environmentally friendly technology. Farmers who consistently apply mitigation strategies tend to have more stable crop yields than farmers who still use conventional methods.

Based on the results of the regression analysis, the climate change mitigation variable (X1) showed a positive and significant influence on corn productivity. This indicates that the increase in the implementation of mitigation practices will be directly proportional to the increase in

production output. Empirically, farmers who use climate-resilient varieties and implement simple irrigation systems are able to maintain productivity despite fluctuations in rainfall. In addition, the use of a planting calendar based on climate information also helps farmers determine the optimal planting time.

However, the adoption rate of climate change mitigation among farmers still varies. Some farmers have adopted adaptive technologies and practices, while others still rely on traditional experiences without considering scientific information. This shows that there is a gap in knowledge and access to modern agricultural technology. Therefore, more intensive interventions from the government and relevant institutions are needed to increase the capacity of farmers in the face of climate change.

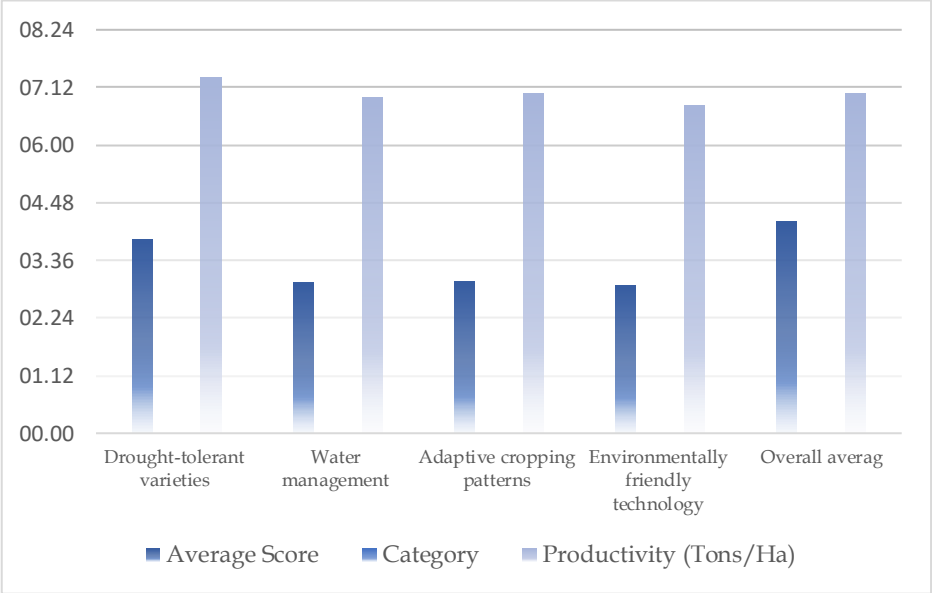

Figure 2. Graph of the analysis of the effect of climate change mitigation on corn productivity

Based on figure 2, it can be seen that the indicator of the use of drought-resistant varieties has the highest score with a high category and contributes to productivity of 6.85 tons/ha. This shows that variety selection is a key factor in dealing with climate change. Meanwhile, the green technology indicator had the lowest score, which indicates that technology adoption still needs to be improved. Overall, the level of climate change mitigation is in the moderate category, indicating that there is still room for improvement in the implementation of adaptive agriculture practices.

From a theoretical perspective, these findings are in line with the concept of climate-smart agriculture which emphasizes the importance of integration between adaptation and mitigation in increasing agricultural productivity. Mitigation practices not only serve to reduce the impact of climate change, but also improve the efficiency of natural resource use. In the local context, the implementation of climate change mitigation in Dompu Regency shows that farmers who are more adaptive to environmental change tend to have better resilience to production risks.

In addition, from the perspective of Pancasila values, climate change mitigation practices also reflect the value of responsibility towards the environment as part of sustainable living ethics. Farmers' awareness in maintaining ecosystem balance can be interpreted as the implementation of Godhead values and social justice, where humans not only pursue economic gains, but also maintain the sustainability of nature for future generations.

However, there are several obstacles in the implementation of climate change mitigation, such as limited access to technology, low levels of education for farmers, and lack of policy support specific to climate change adaptation. Therefore, a more comprehensive strategy is needed, including increasing extension, strengthening farmer institutions, and integrating policies that support sustainable agriculture.

2. Analysis of the Influence of Sustainable Agriculture Policies on Corn Productivity

Sustainable agricultural policies are an important factor in supporting the increase in corn productivity, especially in the face of the challenges of climate change and limited natural resources. In Dompu Regency, agricultural policies not only focus on increasing production, but also begin to lead to a more sustainable approach through government programs such as subsidies for superior seeds, assistance for production facilities, strengthening farmer institutions, and agricultural extension. The results of the study show that sustainable agriculture policies have a positive influence on corn productivity, although the implementation rate still varies at the farmer level.

Based on the results of the regression analysis, the variables of sustainable agricultural policy show a significant influence on corn productivity. This shows that the better the implementation of policies that support sustainability, the higher the level of productivity produced by farmers. Policies that provide access to agricultural technology, production input subsidies, and training to farmers have been proven to improve production efficiency and crop quality. In addition, the existence of farmer institutions such as farmer groups and cooperatives also plays an important role in supporting the distribution of information and access to government assistance.

However, the implementation of sustainable agricultural policies in the field still faces various obstacles. One of the main obstacles is the lack of coordination between stakeholders, so that the programs that are carried out are often not on target. In addition, budget constraints and complex bureaucracy are also obstacles to the effective implementation of policies. Some farmers also complained that the assistance provided was not always in accordance with their needs, both in terms of the type and timing of distribution.

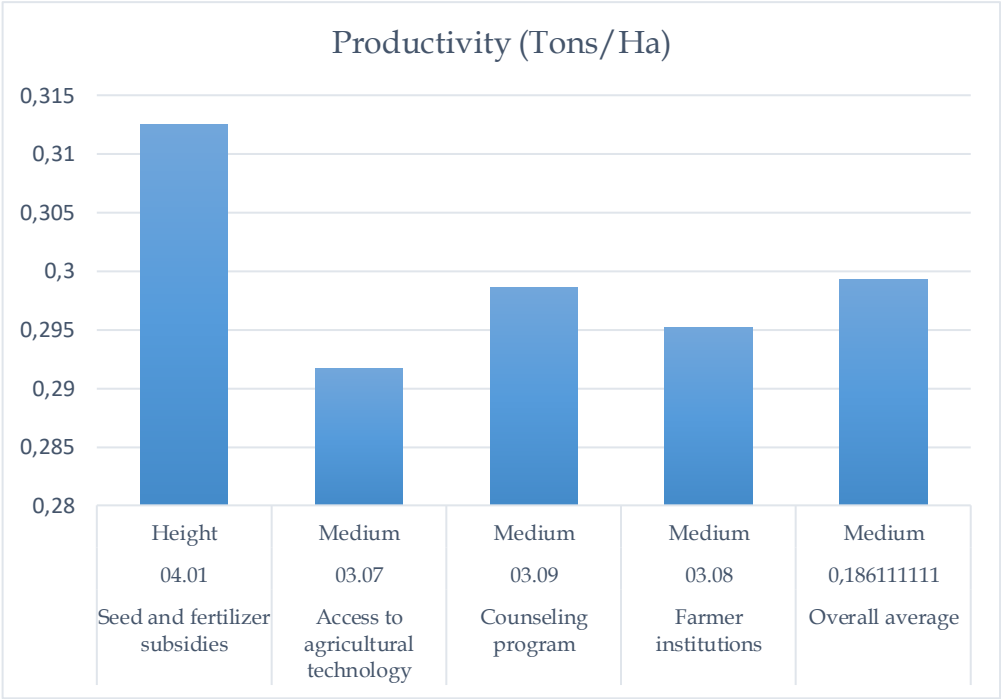

Figure 3. Graph of analysis of the influence of sustainable agricultural policies on maize productivity

Based on Figure 3, it can be seen that the seed and fertilizer subsidy indicator has the highest score and contributes the most to corn productivity, which is 6.90 tons/ha. This shows that production input support is still the main factor in increasing agricultural yields. Meanwhile, the agricultural technology access indicator has a lower score, which shows that the use of modern technology is still not optimal among farmers.

Overall, sustainable agriculture policies are in the medium category, which indicates that although policies are in place, their implementation still needs to be improved. This indicates that there is a gap between policy formulation and its implementation in the field. Therefore, a more

integrated and participatory approach is needed in the formulation and implementation of agricultural policies.

From a theoretical perspective, these findings show that public policy has a strategic role in driving the transformation of the agricultural sector towards a more sustainable system. Effective policies must not only be able to increase production, but must also pay attention to environmental and social aspects. In this context, sustainable agricultural policies must be able to integrate the principles of economic efficiency, environmental conservation, and social justice.

If associated with the values of Pancasila, sustainable agricultural policies reflect the implementation of social justice and people's values. Policies that favor smallholders, provide equitable access to resources, and involve farmers in the decision-making process are tangible manifestations of these values. In addition, strengthening farmer institutions also reflects the value of unity and mutual cooperation in the development of the agricultural sector.

However, to increase the effectiveness of sustainable agriculture policies, several strategic steps are needed, including increasing inter-agency coordination, simplifying bureaucracy, and increasing farmer participation in policy formulation. In addition, the use of digital technology in the agricultural system also needs to be improved to support efficiency and transparency in aid distribution.

Thus, it can be concluded that sustainable agricultural policies have a significant influence on corn productivity in Dompu Regency. However, to achieve optimal results, improvements are needed in policy implementation and strengthening synergy between stakeholders. A policy approach based on Pancasila values is expected to be able to create an agricultural system that is not only productive, but also fair and sustainable.

3. Analysis of the Influence of Pancasila Values on Corn Productivity

Pancasila values as the basis of the nation's ideology have a role that is not only normative, but also applicable in various development sectors, including the agricultural sector. In the context of increasing corn productivity in Dompu Regency, Pancasila values can be internalized through agricultural practices that are fair, participatory, based on mutual cooperation, and oriented towards environmental sustainability. The results of the study show that the integration of Pancasila values in agricultural practices has a positive influence on corn productivity, although this influence is indirect through improving the quality of social and institutional interactions of farmers.

Based on the results of the regression analysis, the variables of Pancasila values showed a positive and significant influence on corn productivity. This indicates that the higher the level of application of Pancasila values in agricultural activities, the better the production results achieved. Values such as mutual cooperation, fairness in the distribution of produce, and participation in decision-making have been proven to be able to increase the effectiveness of farmers' collective work. For example, in planting and harvesting activities, farmers who apply the principle of mutual cooperation tend to be more efficient in the use of labor and time.

In addition, the value of the people who emphasize participation in decision-making also contributes to increased productivity. Farmers who are actively involved in farmer groups or discussion forums tend to have better access to information, technology, and government assistance. This has an impact on increasing their capacity to manage farming businesses more productively and sustainably. Meanwhile, the value of social justice is reflected in a more equitable distribution of produce, thus encouraging farmers' motivation to increase production.

However, the level of internalization of Pancasila values among farmers still varies. Some farmers have implemented these values in their daily practices, while others are still individualistic and less involved in collective activities. This shows that strengthening social and cultural values is still needed to support sustainable agricultural development

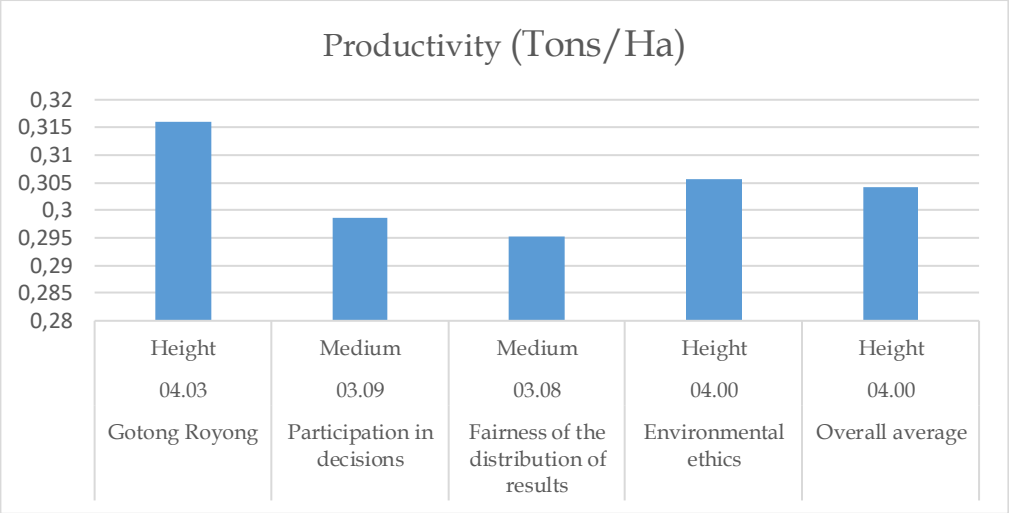

Figure 4. Graph of the analysis of the influence of Pancasila values on corn productivity

Based on Figure 4, it can be seen that the gotong royong indicator has the highest score with a high category and contributes to productivity of 6.95 tons/ha. This shows that cooperation between farmers is an important factor in increasing efficiency and production yields. In addition, environmental ethics indicators also show high scores, which indicates the awareness of farmers in maintaining environmental sustainability as part of sustainable agricultural practices.

Overall, Pancasila values are in the high category, which shows that social and cultural aspects have an important role in supporting agricultural productivity. This reinforces the view that agricultural development depends not only on technical and economic factors, but also on the social values that underlie the behavior of farmers.

From a theoretical perspective, these findings show that social and cultural values can be social capital that contributes to the success of agricultural development. Social capital such as trust, norms, and social networks can improve coordination and cooperation between farmers, thereby increasing efficiency and productivity. In this context, Pancasila values can function as a normative framework that strengthens this social capital.

Furthermore, the integration of Pancasila values in agriculture also reflects a sustainable and equitable development approach. The value of God encourages moral awareness in protecting nature, the value of humanity emphasizes the welfare of farmers, the value of unity strengthens cooperation, the value of the people encourages participation, and the value of social justice ensures the equitable distribution of results. Thus, the application of Pancasila values not only has an impact on increasing productivity, but also on the sustainability of the agricultural system as a whole.

However, there are several challenges in internalizing Pancasila values consistently, such as changing the mindset of the younger generation, the influence of modernization, and the weakening of the culture of mutual cooperation in several regions. Therefore, efforts are needed to strengthen these values through education, counseling, and institutional strengthening of farmers.

4. Analysis of the Influence of Farmer Capacity on Corn Productivity

Farmer capacity is a key factor in determining the success of farming, especially in facing the dynamics of climate change and the demands of sustainable agricultural implementation. The capacity of farmers in this study includes education level, farming experience, access to information, and participation in training. The results of the study show that the capacity of farmers has a significant influence on corn productivity in Dompu Regency. Farmers with higher capacities

tend to be able to manage land more efficiently, adopt agricultural technology, and respond to climate change more adaptively.

Based on the results of regression analysis, the farmer capacity variable showed a positive and significant influence on corn productivity. This shows that increasing the capacity of farmers will have a direct impact on increasing production yields. Farmers with higher levels of education tend to understand agricultural technical information and innovations more easily, so they are faster to adopt modern agricultural practices. In addition, farming experience is also an important factor that affects farmers' ability to make the right decisions, especially in conditions of climate uncertainty.

Access to information is also an important component of farmers' capacity. Farmers who have access to weather information, agricultural technology, and market prices tend to have an advantage in planning farming activities. This information can be obtained through agricultural extension agents, digital media, and social networks between farmers. Meanwhile, participation in training and extension activities has been proven to be able to improve farmers' skills and knowledge in implementing sustainable agricultural practices.

However, not all farmers in Dompu Regency have adequate capacity. There are still farmers with low levels of education, limited access to information, and lack of participation in training. This leads to a productivity gap between farmers, where farmers with low capacity tend to have lower production yields. Therefore, increasing the capacity of farmers is one of the priorities in the development of the agricultural sector.

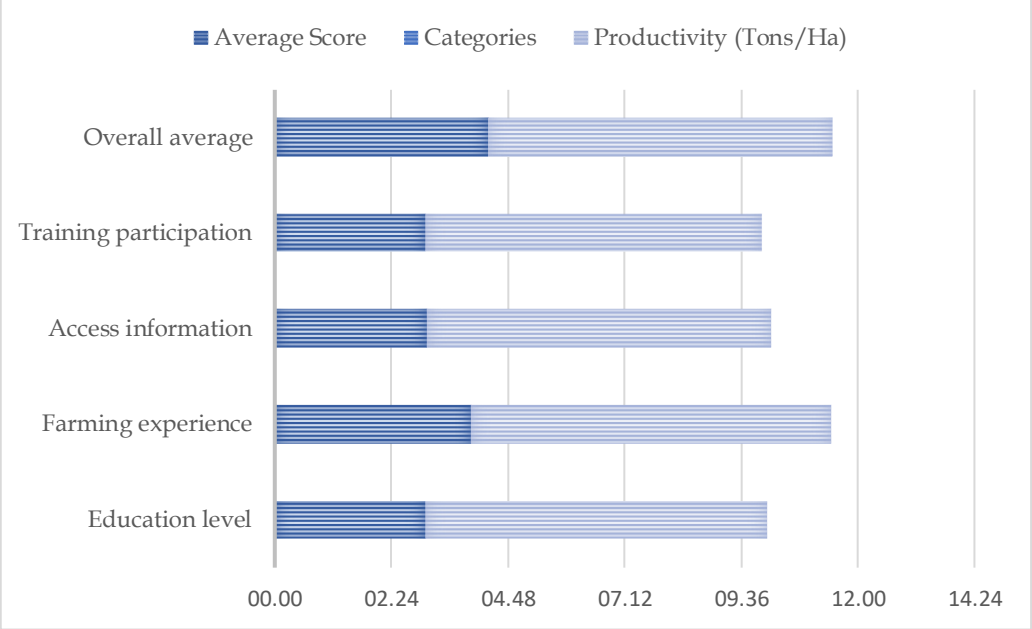

Figure 5. Graph of analysis of the influence of farmers' capacity on corn productivity

Based on Figure 5, it can be seen that the farming experience indicator has the highest score with a high category and contributes to productivity of 6.85 tons/ha. This shows that practical experience has an important role in improving farmers' ability to manage farming businesses. Meanwhile, the training participation indicator had the lowest score, indicating that farmer involvement in capacity building activities still needs to be improved.

Overall, the capacity of farmers is in the medium category, which indicates that there is still room for improvement in the aspects of education, access to information, and training. This is a challenge as well as an opportunity for the government and related institutions to improve the quality of human resources in the agricultural sector.

From a theoretical perspective, farmer capacity is part of human capital which plays an important role in increasing the productivity and efficiency of farming businesses. High human capital allows farmers to adopt innovation, manage risk, and increase competitiveness. In the

context of sustainable agriculture, farmer capacity is also a key factor in the implementation of environmentally friendly and adaptive agricultural practices to climate change.

If associated with the values of Pancasila, increasing the capacity of farmers reflects the implementation of human values and social justice. Efforts to increase capacity through education and training are a form of respect for the right of farmers to acquire adequate knowledge and skills. In addition, equal access to information and training is also a form of social justice in agricultural development.

However, there are several obstacles in increasing the capacity of farmers, such as limited educational infrastructure, low interest of the younger generation in the agricultural sector, and limited extension workers. Therefore, more innovative strategies are needed, such as the use of digital technology in counseling, the development of field schools, and farmer regeneration programs.

Thus, it can be concluded that farmer capacity has a significant influence on corn productivity in Dompu Regency. Increasing the capacity of farmers through education, training, and access to information is key in creating a productive, adaptive, and sustainable agricultural system.

5. Integrative Strategy Model for Increasing Corn Productivity Based on Climate Change Mitigation and Pancasila Values

The results of the analysis in the previous subchapter show that four main variables, namely climate change mitigation, sustainable agriculture policies, Pancasila values, and farmer capacity, have a significant influence on corn productivity in Dompu Regency. Therefore, a strategic model is needed that is able to integrate these four variables comprehensively in one sustainable agricultural development framework. This integrative strategy model is designed to address the complex challenges faced by the agricultural sector, particularly in increasing corn productivity amid increasingly uncertain climate change.

The integrative approach in this study emphasizes the importance of synergy between technical, policy, social, and ideological values. Climate change mitigation serves as a technical basis for increasing production resilience to climate variability. Sustainable agriculture policies serve as structural instruments that support the implementation of efficient and environmentally friendly agricultural practices. Meanwhile, farmer capacity is the main driving factor in the adoption of innovation and technology. On the other hand, the values of Pancasila function as a normative foundation that ensures that the entire agricultural development process runs in a fair, participatory, and sustainable manner.

Based on the results of the SWOT analysis carried out, a number of internal and external factors were obtained that influenced the development of strategies to increase corn productivity. Strength factors include the potential of large land, farmers' experience, and the existence of government policy support. Weakness factors include low technology adoption, limited access to information, and uneven farmer capacity. Opportunity factors include the development of agricultural technology, government program support, and increasing market demand for corn. Meanwhile, threat factors include climate change, price fluctuations, and land degradation.

Table 1. Integrative strategy matrix for increasing corn productivity

Strategy Aspects	Internal & External Factors	Resulting Strategy
SO (Strength-Opportunity)	Large land and technology support	Production optimization through adaptive agriculture technology
WO (Weakness-Opportunity)	Low capacity and government programs	Increased technology-based training and counseling
ST (Strength-Threat)	Farmers' experiences and climate change	Strengthening local experience-based mitigation practices
WT (Weakness-Threat)	Limited access and climate risks	Strengthening agricultural institutions and information systems

Based on Table 1, the SO strategy emphasizes on the utilization of internal power to capture external opportunities through the optimization of agricultural technology. The WO strategy focuses on increasing the capacity of farmers through training and counseling. The ST strategy leads to the utilization of farmers' experiences in dealing with the threat of climate change, while the WT strategy emphasizes on strengthening institutions to reduce the risks faced.

The integrative strategy model produced in this study is not only technical, but also based on Pancasila values. The value of unity and mutual cooperation is reflected in the strengthening of farmer institutions and cooperation between stakeholders. People's values are realized through the active participation of farmers in decision-making. The value of social justice is reflected in the equitable distribution of access to technology, information, and government assistance. Meanwhile, the value of Godhead and humanity is reflected in the awareness to preserve the environment as part of moral responsibility.

The implementation of this strategy model requires support from various parties, including local governments, extension institutions, the private sector, and the farming community itself. The government plays a role in providing supportive policies, infrastructure, and incentives for farmers. Extension institutions play a role in increasing the capacity of farmers through education and training. Meanwhile, the private sector can play a role in providing technology and market access. This collaboration between parties is key in creating a productive and sustainable agricultural system.

From an academic perspective, this integrative strategy model makes a new contribution to the development of sustainable agriculture theory, especially by including the dimension of Pancasila values as part of the analytical framework. This approach enriches the literature that has so far focused more on technical and economic aspects, by adding social and ideological dimensions as important factors in agricultural development.

However, the implementation of this model is inseparable from various challenges, such as limited resources, resistance to change, and policy dynamics that are not always consistent. Therefore, a strong commitment from all stakeholders is needed to ensure the successful implementation of this strategy.

Thus, it can be concluded that the integrative strategy model based on climate change mitigation, sustainable agricultural policies, farmer capacity, and Pancasila values is an effective approach in increasing corn productivity in Dompu Regency. This model is not only able to increase production yields, but also create a sustainable, adaptive, and equitable agricultural system.

CONCLUSION

Based on the results of the study, it can be concluded that the increase in corn productivity in Dompu Regency is significantly influenced by the integration between technical, policy, social, and ideological factors. Climate change mitigation has proven to be a key factor in maintaining the stability of corn production in the midst of uncertain climatic conditions. The application of practices such as the use of drought-resistant varieties, efficient water management, and adaptive planting patterns can increase the resilience of agricultural systems to environmental risks. In addition, sustainable agricultural policies that provide support in the form of subsidies, access to technology, and strengthening farmer institutions also contribute positively to increasing productivity. However, the effectiveness of the policy is still influenced by the uneven level of implementation in the field.

Furthermore, the results of the study show that Pancasila values have a strategic role as a social and moral foundation in agricultural development. The values of mutual cooperation, social justice, participation, and environmental ethics have been proven to be able to strengthen cooperation between farmers, increase farming efficiency, and encourage more sustainable agricultural practices. On the other hand, the capacity of farmers is also a determining factor in the successful adoption of agricultural innovations and technologies. Farmers with better levels of education, experience, and access to information tend to have higher productivity. Therefore, increasing the capacity of farmers through training, counseling, and the use of digital technology is a strategic step that needs to be encouraged.

Overall, this study produced an integrative strategy model that combines climate change mitigation, sustainable agriculture policies, farmer capacity, and Pancasila values as a holistic approach in increasing corn productivity. This model is not only oriented towards improving production output, but also emphasizes aspects of environmental sustainability and social justice. The implementation of this strategy requires synergy between the government, farmers, and related sectors in order to run effectively and sustainably. Thus, the approach based on Pancasila values is an important contribution in strengthening the direction of national agricultural development that is not only productive, but also fair and resilient to climate change.

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