



Agro-Socioeconomic Newsletter

Indonesian Center for Agricultural Socio Economic and Policy Studies (ICASEPS)

Editorial

Dear Readers,

We are happy to meet you again this year, as all researchers started their activities with a new enthusiasm entering 2022. Our Newsletter contains important research results along with other valuable information. "Vegetable Supply Chain in the COVID-19 Pandemic" (Dr. Bambang Sayaka) and "Monitoring and Evaluation of the Dynamics of Agricultural and Rural Development: PATANAS (National Farmers Panel)" (Dr. Ashari) are brought to you to enrich your knowledge about the socio-economic issues of the two topics. Moreover, information on policy related to local content for the development of agricultural machinery should refresh your ideas about agricultural mechanization development in Indonesia.

A list of publications and some news are also provided in this Newsletter. Among the news are our active participation as Chair of the Agricultural Working Group in the First Agriculture Deputies Meeting of Indonesia G20 Presidency, as well as IndoFinance's joint rice harvest event, which is one of the outcomes of ICASEPS collaborative research activities with international organizations.

Thank you
The Editor

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Research Findings



VEGETABLE SUPPLY CHAIN IN THE COVID-19 PANDEMIC

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Background

The COVID-19 pandemic, followed by the Large-Scale Social Restriction (PSBB) and subsequently called Community Activity Restriction Enforcement (PPKM), caused the agricultural products, especially vegetables, supply chain disrupted. Many economic activities, such as manufacturing and tourism, are slowed down or restricted, resulting in limited activities of institutional consumers, e.g., hotels, restaurants, and catering (HORECA). The impacts of the COVID-19 pandemic are the decreased demand for agricultural commodities, including vegetables.

This study aims to formulate a policy recommendation on the impact handling of the COVID-19 pandemic on the vegetable supply chain, especially those of chili and leafy vegetables. The study was carried out in three provinces, i.e., West Java, Central Java, and Jakarta.

Ministry of Agriculture's Programs for Vegetable Agribusiness Recovery

The Ministry of Agriculture's (MoA) response to the COVID-19 pandemic prioritizes staple food fulfillment for the people and protecting the agricultural sector. Three programs implemented are: (i) Refocusing activities and budgets for preventing COVID-19 pandemic transmission, strengthening food availability, and designing social safety net; (ii) Accelerating the labor-intensive programs; and (iii) Maintaining staple food availability.

The Directorate General of Horticulture (DGH) applied guidance on the Early Warning System (EWS) of horticulture commodities through the link of production data, distribution, and harvest schedule. MoA provided marketing facilitation to Farmers' Market (*Pasar Tani*) and allocated funds for horticulture product purchases to the farmers affected by the COVID-19 pandemic. Encouraging online marketing of horticulture commodities through e-Commerce during the COVID-19 pandemic was the MoA's target through DGH in 2021.

Impacts and Behavior Changes of Vegetable Consumption

Few consumers bought less chili and leafy vegetables during the pandemic. Chili and leafy vegetables purchased by consumers were less frequently weekly. Some consumers also purchased less quality of those vegetables.

The type of chili consumers most purchased during the pandemic was cayenne pepper, and the least was green chili. Spinach and *pok choy* were the most purchased leafy vegetables in Central Java Province, while those in West Java Province were water spinach and mustard.

The consumers in Central Java Province tended to buy vegetables from the previous retailers even though few kept purchasing vegetables at the kiosk/stall rather than at the market. Some consumers in West Java Province also tended to buy vegetables at the kiosk/stall rather than in the traditional market. Consumers in both provinces preferred more vegetables sold in the packaging.



Fishbone analyses of the consumers in both provinces showed that the households in Central Java consumed much fewer vegetables than those in West Java. In Central Java, it was due to: (a) process products availability, (b)

limited volume of sale at the retailer level, (c) the sellers got less supply, (d) lack of vegetable storage, and (e) the vegetable sold as what it was. Decreased vegetable consumption in West Java was due to: (a) limited sales at the retailer level, (b) the sellers were lack of capital, and (c) sold as it was. The similarities in both provinces were: (a) limited sales at the retailers' level and (b) sold as it was.

Fishbone analysis in Central Java Province showed that sellers' main perception of decreased vegetable sales with relatively low policy scores were: (a) difficult to predict pest/disease attack, (b) decreased buyers' income, (c) difficult to assess and apply good agriculture practice, and (d) lack of capital for vegetable growing and post-harvest. It meant that the sellers could control the issues, but they did not have supporting facilities for marketing. Like in Central Java, the sellers in West Java could manage the risk due to its relatively detected. The highly fluctuating price was a relatively high risk that needed attention.

Demand elasticity for chili and leafy vegetables during the pandemic changed variously between provinces, but in general, it was still inelastic. Supply elasticity for chili and leafy vegetables tended to decrease during the pandemic but was still inelastic.

Changes in Vegetable Distribution Patterns

The vegetable supply chains from farmers to collecting traders, wholesalers, retailers to consumers in Central Java and West Java Provinces did not change before and during the pandemic. The supply chain halted for a moment during early PSBB implementation. Along with inter-regional transportation loosening, the vegetable supply chain resumed. Nevertheless, price fluctuation at the farm level was still occurring as the demand for vegetables was unstable. Decreased demand for vegetables by HORECA affected farmers who used to sell quality vegetable dealing with their product marketing. Marketing margin earned by vegetables, including chili and leafy vegetable traders, varied among vegetable type, marketing level, and market location.

Hotels and restaurants purchased vegetables, including chili and leafy vegetables, through suppliers based on the monthly or certain period contract agreement. During the pandemic, the hotels and restaurants also purchased vegetables directly from

traditional markets as the price was lower and relatively good quality.

On the other hand, consumers had more alternatives for marketing channels in vegetable purchases especially through online marketing companies commonly found in urban areas. In general, the vegetable supply chain from farmers to consumers did not change, but the online purchase was more popular. Vegetable quality sold through online marketing was good enough in accordance with consumers' purchase power.

Impacts of Pandemic on Production Patterns at Farm Level

Various chilis production in Central Java was mainly 300-600 kg per farmer of curly red chili and more than 800 kg of cayenne pepper per growing season. In West Java, the dominant farmers produce more than 800 kg of chili per growing season. The farmers in West Java were more specialized in producing various chili, especially curly red chili, i.e., 67% of the farmers each produced 300-600 kg per growing season, 27% of the farmers produced more than 800 kg of cayenne pepper, and the remaining produced other chilis.

Chili planted area in Central Java was less than 0.1 ha on average, while that in West Java was at least 0.5 ha on average per farmer. In general, the chili farm business in West Java was more intensive than that in Central Java. Chili price at the farm level was relatively the same before and during the pandemic. Wholesalers and provincial-level chili prices affected the farm-gate price. Commodity change from chili to other crops at the farm level negatively affected the chili price.

Policy Implication



MoA policy for vegetable farmers should consist of two aspects, i.e., (i) production inputs and capital and (ii) marketing. In addition, KUR requirements should be loosened such that the

available credit is accessible optimally to the farmers. KUR debtors are not necessarily individuals because most small farmers lack knowledge of bank administration, and no collateral is required by the bank.

Facilitating the farmers' marketing activities is urgent because constraints during the pandemic resulted in lower farm business profit or even loss. Online marketing with the off-takers as the intermediary and the risk-taking agency is crucial. Some fintech and e-commerce companies have been operating long before the pandemic with relatively low market share but are better off during the pandemic.

Facilitating vegetable farmer groups with cold storage and cooler-box transport car, as well as marketing accompaniment to selling directly to consumers or through e-commerce, is crucial as volume and quality requirements are very strict. On-the-job training such as sorting, packaging, storage, and delivery to online marketing companies or directly to consumers is urgent.

Agricultural insurance coverage should also be extended to cover the interest of vegetable farmers. Vegetable farm business risk during the pandemic is higher due to low consumers demand. The government, including MoA, may encourage the central and regional government's employees to purchase vegetables directly from the farmers at a fair price.

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MONITORING AND EVALUATION OF THE DYNAMICS OF AGRICULTURAL AND RURAL DEVELOPMENT: PATANAS (NATIONAL FARMERS PANEL)

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Background



The National Farmers Panel (PATANAS) is a research activity that explores various information about agricultural and rural development and is monitored continuously and sustainably. This research has been carried out by the

Indonesian Center for Socio-Economic and Agricultural Policy (ICASEPS) since the 1980s in several provinces in Indonesia. Households in rural areas have become the unit of analysis by taking a sample of about 40 households in each sample village. The dynamics of agricultural and rural conditions were thoroughly considered in their adjustment to the location and sample households in a certain period.

The objectives of the PATANAS research carried out in 2021 are to (a) build a database in the form of panel data at the household level, farm level, and village level in various agroecosystems, (b) compile and analyze rural socio-economic indicators in various agroecosystems, and (c) formulate policy recommendations for agricultural development in rural areas.

The 2021 PATANAS research was conducted in seven provinces on different agroecosystems (AE), namely irrigated paddy fields (rice, shallot), lebak paddy fields (rice), rainfed (soybeans), dryland secondary food crop fields (corn), dryland vegetables (chili), dryland plantation (sugar cane, rubber, oil palm, cocoa), and dryland livestock. The total number of sample villages is 20, which was purposively selected to combine the 2007–2018 PATANAS sample villages and the new villages.

Primary data were collected through interviews with sample households at which variable coverage was grouped by type of data: (a) household and farm level data and (b) village level data. Data at the household and farm level are grouped into six aspects, namely: (a) household characteristics, (b) land, (c) farming and production technology, (d) labor, (e) income, and (f) consumption and expenditure. In addition to primary data, secondary village-level data were obtained from the local village government. Meanwhile, the Village Potential (PODES) data supplemented with data and information from village key informants were also collected.

Research Results and Conclusions

1. Database

In 2021, the PATANAS database covered nine aspects, namely (a) demographic characteristics, land tenure and its dynamics, and non-land assets, (b) sample parcel farming, (c) recapitulation of other parcel farming businesses, (d) changes in agricultural technology, (e) livestock management, (f) income from off-farm and non-agricultural activities, (g)

income without work, (h) migration dynamics, and (i) household consumption. The database for each variable for all Patanas villages is aggregated according to the agroecosystem.

2. Rural Socio-Economic Strategic Indicators

Household level

The proportion of working household members showed a decrease. The results of Logit's analysis show that age, education, and type of agroecosystem influence the decision of family members to work or take care of the household.

The baby boomers and generation X mostly work in agriculture (farmers, ranchers, farm laborers) compared to other jobs. There is a downward trend in the number of generation X, Z, and millennials working in the agricultural sector. Millennials are rising in professional jobs, while generation Z is increasing in work participation in manufacturing.

In 2021, a change in the percentage of households working in the agricultural sector occurred. The percentage of households working in agriculture tends to decrease to 56.7% compared to the previous year's period of 61.87%. Meanwhile, the percentage in trade, manufacturing, and professional sectors tends to increase.

The percentage of farmer household members who work in the agricultural sector is dominated by workers who have graduated from elementary school. This condition is a challenge in implementing the dissemination of agricultural technology developments, both through counseling and the application of agricultural technology 4.0.

The average wage rate shows the differences between agroecosystems. The highest wages are found in the AE plantation, which averages IDR 111 thousand/day for male workers, while the lowest is in the AE dry land vegetable.

Farming level

Based on the analysis of farming, all basis/primary commodities are economically feasible, as reflected in the R/C value of each commodity which is higher than 1. Plantation and livestock commodities have relatively stable prices. Panel data on rice farming in AE-irrigated paddy fields shows increased farming costs but decreased productivity and quality, causing a decline in grain prices. The average reduction in productivity reached 6.02%. On non-owned land, the average decline in productivity is sharper, 8.70%. This happens because, generally, the land shared or leased by the land owner is land with a production risk.

On non-owned land, the highest increase in the share of farming costs occurred in the land cost component. The high share of land costs increased due to the scarcity of arable land while the demand for land was relatively high. This is indicated by the increase in the number of respondents who did not own land from 6.47% to 13.79%.

The relatively smoother increase in farming costs is the labor cost component. This shows the increasingly massive use of machinery in farming activities. The use of machinery is mainly in land processing (tractors) and harvesting (combine harvesters), while the use of machinery in planting activities (transplanters) is still infrequent.

Farmers are used to using improved and labeled seeds. The labeled seeds were most widely used in the second dry season (MK2) (70%), while the lowest labeled seeds occurred in MK

1 (52%). The majority of labeled seed sources come from traders/kiosks.

The rice variety planted by the majority of farmers is Inpari. When compared between planting seasons, it can be seen that there is consistency in the order of the percentage of varieties planted by farmers, namely Inpari, Ciherang, and Mekongga. A small number of farmers use IR 64 and IR 32. Panel data shows that the use of Ciherang rice varieties is decreasing. The use of the Ciherang in 2010 was 52.3%, and in 2021, it was 35.3%. In the same period, Inpari, initially was used by 11.2% of farmers, jumped to 48.3%.

Village level

The direction of change in the size of land ownership varies between villages and between agroecosystems. The average land ownership in rural Java Island is narrower than outside Java Island. In addition, the average landholding in rural areas on Java Island tends to be narrower, while outside Java Island, it increases. In general, the distribution of land ownership tends to be increasingly unequal (the Gini index was 0.66 in the base year and 0.68 in 2021). Nonetheless, these trends vary between agroecosystems.

The distribution of control of cultivation is relatively even because there are cultivation transactions through a rental or

profit-sharing system. The Gini coefficient was around 0.59 in the base year; in 2021, it was about 0.58. In villages where the main commodity is annual crops, the total area of cultivation per year is wider than land ownership because some farmers cultivate their land with planting intensity more than once a year.

The contribution of income and non-agricultural work participation is higher than in agriculture. The openness of villages - cities influences this. Meanwhile, agricultural income is influenced by the contribution of arable land area, productivity, level and fluctuation of agricultural commodity prices, farming risk factors, and other factors.

The income dynamics in the agricultural and non-agricultural sectors can be used to determine the direction of development of the rural economic transformation. Using panel data for 2016 and 2021, the structure of household income in AE rice-based irrigated paddy fields, and dryland secondary food crops show an increasingly non-agricultural orientation. Meanwhile, in dry land plantations, the role of the agricultural sector in household income has increased. The decline in the income contribution of the agricultural sector occurred in farming activities but was followed by an increase in the income contribution from farm workers.

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STRATEGY TO INCREASE LOCAL CONTENT FOR THE DEVELOPMENT OF AGRICULTURAL MACHINERY¹

Background

Agricultural mechanization has a strategic and significant role in efforts to increase the efficiency, productivity, and quality of agricultural output and its derivative products. Agricultural mechanization contributes from upstream to downstream, from pre-harvest to post-harvest activities and processing of agricultural products. In addition, the increasing need for agricultural tools and machinery has also opened up markets for related manufacturing industries. In turn, this adds impetus to economic growth in a broad sense. Therefore, it is very important to meet the needs of agricultural tools and machines as much as possible from domestic production. For this reason, an increase in the portion of the Domestic Component Level in agricultural machinery (TKDN *alsintan*) is urgently needed.

The authority to increase investment, production, and TKDN *alsintan* certification rests with the Ministry of Industry and other ministries/institutions. However, as a member of the Team for Increasing the Use of Domestic Production (TP3DN), it is important for the Ministry of Agriculture to encourage an increase in TKDN in agricultural machinery production.

Macro Performance of the Machining Industry and *Alsintan*

The government's efforts to encourage the Agricultural Machinery and Equipment Industry (IPAMP) by increasing local content are very justified. During the 2015–2019 period, the performance of the IPAMP sector tended to decline, among others.

Policy Development



The investment value of the IPAMP sector during the 2015–2019 period decreased sharply from IDR 8.08 trillion (2015) to IDR 3.16 trillion (2019). The COVID-19 pandemic is expected to continue suppressing

investment in the IPAMP sector.

The IPAMP sector's export-import balance during the 2015–2019 period still experienced a sizeable deficit, although there was a downward trend. A decrease in imports mainly triggered the decrease in the deficit from USD 28.24 billion (2015) to around USD 24 billion to USD 26 billion (2016–2019). Exports were relatively stable in the range of USD 4.0 billion to USD 5.0 billion.

Data from the Ministry of Industry reveal that in 2020 there were 43 companies engaged in the agricultural machinery industry, both PMA (foreign investment), PMDN (domestic), and non-facilities for PMA/PMDN. These companies, in general, keep importing raw materials and capital goods needed by their factories in Indonesia to support the production process.

The requirements that companies must meet so that their TKDN can be assessed and certified are that they must employ Indonesian and be located and produce in Indonesia. TKDN certificate validity period is three years and can be extended as required. Data as of May 2021 shows the number of *alsintan* products that have received TKDN certificates has reached 332, but only 129 are still valid. Of the 129, they are divided into TKDN categories as follows: (a) 11 products with TKDN of

¹ Based on analysis report prepared by Sudi Mardianto, Adi Setiyanto, Sumaryanto, and Sahat M. Pasaribu, Indonesian Center for Agriculture Socio-Economic and Policy Studies, Ministry of Agriculture

<25%, (b) 59 products with TKDN of 25–40%, and (c) 92 products with TKDN of >40%.

The weighted average TKDN of machinery and *alsintan* in 2020 reached 42.81%. Opportunities for the procurement of *alsintan* sourced from the government reach IDR 13.5 trillion, and there is a potential for an increase of IDR 1.5 trillion. Procurement opportunities will still increase from the potential purchase of *alsintan* by agricultural business actors independently and for export. The export market is targeted to achieve USD 7.11 trillion in 2024, while investment companies for agricultural machinery are targeted to reach IDR 19.23 trillion in 2024.

Opportunities and Challenges for Increasing TKDN Alsintan

Opportunities

The opportunity to increase TKDN in *alsintan* products is quite large, as indicated among the others:

Government policy requires central and regional government agencies and BUMN/BUMD to use goods and services with TKDN plus the lowest Company Benefit Weight (BMP) of 40%. This policy encourages procurement actors to be more active in calculating a minimum TKDN of 25% and a minimum BMP of 15% by conducting a sounding market, no longer being passive as before when waiting for bids. Apart from being an investment opportunity, this policy is a captive market for industries with high TKDN of *alsintan*.

The government and private agricultural businesses carried out the agricultural mechanization program to boost production and productivity in all agricultural sub-sectors (food crops, horticulture, estate crops, and animal husbandry). In the long term, this program can potentially enlarge the domestic agricultural machinery market.

Indonesia has mastered the technology for making agricultural machinery types that are the most widely used and needed by farmers. Among those are hand tractors, two-wheeled tractors, rice power threshers, corn shellers, multipurpose threshers, straw choppers, and water pumps.

Based on the 2018 BPS SUTAS data, farmers who use agricultural machinery in Indonesia are still relatively low at around 39%, so there is still a market opportunity of about 61%. When viewed per sub-sector, the highest opportunities are in the animal husbandry, plantation, and horticulture sub-sectors. In each sub-sector, farmers who do not use agricultural mechanization are still about 97%, 91%, and 89%, respectively. Of food crop farmers, there are still 44% who have not used agricultural mechanization.

The Agricultural Mechanization Development Center (BBP Mektan) is currently working with the private sector to develop several agricultural machinery products. A cooperation scheme like this will speed up the process of implementing and producing technology produced by research institutions, as well as increasing local content in the country.

Challenges

Referring to the level of industrial development as well as in the country, the ideal TKDN value can be said to be relatively low. This is due to, among others, (a) the unavailability of high technology-based industries, both for machinery and equipment; (b) no industrial component/raw material manufacturing industry that meets the needs, (c) the deepening of the industrial structure

in accordance with the existing industrial tree still needs to be improved, (d) principal policies in meeting the needs of components that must be imported from abroad, and (e) more expensive domestic components with specifications that are not in accordance with market demand.



Another challenge is the relatively high import of *alsintan*, which is caused by, among others, (a) similar products are imported from other countries, with lower prices, especially agricultural

machinery from China, (b) relatively limited mastery of technology, particularly the medium to advanced level of technology, (c) the domestic industry has not been fully able to supply the needs of domestic *alsintan*, especially large *alsintan*, such as four-wheeled tractors and combine harvesters, (d) some components still have to be imported, for example, tires for the R4 tractor, primer mover, gear box, implements for 2-wheeled and 4-wheeled tractors (disc plow, rotary plow, singkal plow, disc garu, ridger, and power disc plow), and the master chip for setting up machines with semi-automatic and semi-automatic drives, (e) after-sales service has not been able to reach all areas that use domestic *alsintan* products, (f) some *alsintan* products are still not suitable for use in the field with specific conditions so that further testing and improvement is still needed, and (g) the need for procurement of goods by the government, which is faster than the speed of supply of domestic agricultural machinery manufacturers and assemblers.

One of the components of agricultural machinery that plays an important role is the diesel engine, as the driving force for various types of agricultural machinery. If this diesel engine can be fully produced in Indonesia, the TKDN of *alsintan* will increase dramatically or even reach 100%. However, diesel engine components have several criteria that still cannot be fully met, such as (a) must meet manufacturing standards and spare parts, (b) have a high level of precision and qualification in production, (c) require qualified personnel in the field of material science, (d) mass production under strict facilities and quality control, (e) has a high degree of complexity in the production process and skilled workforce, and (f) need a large-scale factory and warehouse.

Strategy for Increasing TKDN of Alsintan

Based on the opportunities and challenges of increasing TKDN and the conditions of the *alsintan* industry in Indonesia, the strategy for increasing TKDN needs to be formulated comprehensively. It starts from policy and regulatory support, technology choices that can be developed in the short term, human resource development, the growth of *alsintan* MSMEs, to ownership and financing support with working capital for the *alsintan* business. In summary, the TKDN improvement strategy can be formulated as follows:

In the short term, the reverse engineering strategy can be used as the main option for developing the necessary agricultural machinery prototypes which can be marketed domestically. Reverse engineering is a method to help create a new product based on a pre-existing product. This method is very helpful in speeding up the process of creating new products with identical working systems and methods without using or duplicating the original one.

Production of components and assembly of machine tools in the country. The machine components in question include tires for R4 tractors, Gear Boxes, implements for 2-wheeled and 4-wheeled tractors, master chips to regulate machines with semi- and automatic drives, and spare parts for all types of tools and agricultural machinery. Production of spare parts and assembly of diesel engines in the country has great potential to increase the TKDN of these machines. For example, the "main drive" component with 8.5 HP diesel contributes around 32.01–41.47% of the price of agricultural machinery such as water pumps, corn shellers, rice threshers, straw choppers, and 2-wheeled tractors. Meanwhile, the application ranges from 7.8–11.31% of the price of a wheeled tractor.

Alsintan development collaboration between the Ministry of Agriculture and the Ministry of BUMN, BRIN, PT Pindad, PT Dirgantara, and private machinery companies to develop and produce *alsintan* to be used for agricultural mechanization programs in the food crops, horticulture, estate crops, and animal husbandry sub-sectors.

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PROSPECT OF SUGAR INDUSTRY DEVELOPMENT IN INDONESIA²



Indonesia's raw sugar import quota in 2022 increased to 4.37 million tons or increased by 15.6% (3.78 million tons in 2021), which divided into 3.48 million tons for refined crystal sugar (GKR) and white crystal sugar or consumption sugar (GKP) 891,627 tons. As of 3 December 2021, the average national sugar price was IDR13,100 per kg, slightly above the government reference price of IDR12,500 per kg. The price of sugar at the factory is around IDR10,225 to IDR11,550 per kg. Farmers' sugarcane stocks at state-owned and private sugar mills were 1.28 million tons, imported raw sugar 4,098 tons, Bulog 8,124 tons, and the

remaining imported RNI sugar stock was 3,089.5 tons. The total stock is sufficient to meet sugar needs for the next 5.99 months.

The condition of the domestic cane sugar industry:

- The sugar cane planting area in 2020, which reached 418,996 ha, was still dominated by smallholder plantations (PR) 237,851 ha (57%), followed by large private companies (PBS) 124,461 ha (30%), and large state enterprises (PBN) 56,684 ha (13%). PBN and PR sugar cane areas decreased by around 2.3% and 0.3% per year, respectively, during 2010–2020. On the other hand, PBS increased by approximately 1.1% per year.
- The above conditions had a negative impact. Sugar production fell by an average of around 0.6% per year in the 2010–2020 period. PBN and PBS production decreased by 1.8% and 0.3% per year, respectively, while PR sugar production remained relatively stable.

The condition of the world sugar market:

- Over the past year (January–December 2020), world sugar prices have increased by an average of 2.04%, which is the same dissolution rate period as last year. The reasons for this include a decrease in sugar production in the European Union due to a slight disturbance in planting due to the yellow virus and increased sugar imports from several countries, such as China and the United Arab Emirates.
- World sugar production in 2021/2022 is expected to decrease slightly due to Brazil's sugar production reduction. Still, it is expected to be offset by the increased production in the European Union, India, Russia, and Thailand. World sugar exports fell by 1.6 million tons to 62.7 million, and the global ending stocks for 2021/2022 are expected to increase by 2.9 million tons to become 48.8 million.

Two policy scenarios are proposed for the future development of the Indonesian sugar industry, namely (a) efforts to increase sugarcane plantations and (b) efforts to increase sugar from various sources of raw materials.

Research Activities

2022 ICASEPS RESEARCH ACTIVITIES

Research activities

- Strategy for Strengthening Agricultural Business Institutions in Food Estate Development Areas
- Improving Production Efficiency, Supply Chain, and Competitiveness of the Broiler Poultry Business
- Strategy for Management of Agricultural Equipment and Machinery Government Assistance in Increasing Food Crop Production
- Utilization of Information Technology in Agricultural Product Distribution and Marketing Systems
- Dynamics of Policy Achievements and Dynamics of Agricultural and Rural Development: PATANAS (National Farmers Panel)

Policy analysis

- Strategy to Increase Indonesia's Bargaining Position in Food Commodity Trade in International Markets

- Strategies to Reduce Loss and Waste of Chili Commodity Yield
- Increasing the Utilization of Gundang Receipts as a Food Reserve Instrument
- Quick Response to Agricultural Development Issues:
 - The Impact of the Russia-Ukraine War
 - Beware of the Global Food Crisis
 - Anticipating the Global Food Crisis
 - Restructuring the Palm Oil Industry
 - Anticipating an Outbreak of Mouth and Nail Diseases ahead of Eid al-Adha
 - Looking for a Holistic Policy Format to Overcome the Cooking Oil Crisis
 - Understanding the Dynamics of Changes in Value Added Tax Rates in the Agricultural Sector

² Materials prepared by Sudi Mardianto and Achmad Suryana

ICASEPS Publications

PATANAS BOOK

Based on three micro panel data, recommendations for rural development policies in various agroecosystems could be drawn. This book is a policy synopsis of the results of the 2007–2018 PATANAS research that compiled in the form of a policy document, contains the dynamics of changes that have occurred in the PATANAS village locations. The aspects analyzed in this book include the dynamics of agricultural land resources, agricultural labor, household consumption, farmer/community welfare, and agricultural technology. Each of these aspects is composed by a small team, as follows.

- Dynamics of Agricultural Land Distribution and Transformation: Policy Perspectives toward Equitable Availability and Fairly Accessed (*I Wayan Rusastra, Sumaryanto, Sumedi, Muhammad Suryadi, Sukarman*)
- Dynamics of Application of Technology and Agricultural Production (*Dewa Ketut Sadra Swastika, Erwidodo, Saptana, Chairul Muslim*)
- Dynamics of Labor Mobility and Productivity in Agriculture and Rural Areas (*Tahlim Sudaryanto, Bambang Irawan, Ashari, Sunarsih*)

- Dynamics of Agricultural and Rural Household Food Consumption Patterns and Implications for Food and Agriculture Policies (*Handewi P. Saliem, Hermanto, Mewa Ariani, Tri Bastuti Purwanti*)
- Dynamics of Agricultural Household Income Based on Agroecosystem (*Achmad Suryana, Sri Hery Susilowati, Erma Suryani, Iwan Setiajie Anugrah, Fajri Shoutun Nida*)
- Poverty Dynamics of Farmers and Rural Populations (*Pantjar Simatupang, Ening Ariningsih, Valeriana Darwis, Mohamad Maulana*)

PATANAS microdata analysis concludes that the welfare of farm households, in general, has increased. However, the distribution tends to worsen, and the prevalence of underprivileged people is still high. It revealed that changes in agricultural structure are less transformative-inclusive in the sense that they are not yet conducive to spurring high growth (pro-growth), reducing poverty (pro-poor), and increasing equity (pro-equity). Therefore, the government, in this case, the Ministry of Agriculture, needs to manage the transformation of agriculture and rural areas. The development of advanced, independent, and modern integrated agricultural areas based on farmer corporations is seen as the right initiative to become a major project of the Ministry of Agriculture 2020–2024.

ICASEPS News

FIRST ADM MEETING OF G20 PRESIDENCY INDONESIA 2022



The Ministry of Agriculture, as chair of the Agricultural Working Group (AWG), organized the first meeting of echelon I level officials or the Indonesian G20 Presidency's Agriculture Deputies Meeting (ADM I), which was held for two days virtually, 30–31 March 2022. The meeting, led by the Secretary General of the Ministry of Agriculture and Chairman of the G20 AWG, Dr. Kasdi Subagyo, was attended by 92 delegates consisted by 53 country representatives, 13 invited countries, and 26 international organizations, such as FAO, OECD, UNEP, IFAD, and WTO.

The theme of the AWG G20 Indonesia Presidency is "Balancing Production and Trade to Fulfill Food for All," with three priority issues, namely (a) building resilient and sustainable agriculture and food systems, (b) promoting an open, fair, predictable, and transparent food trade, and (c) encouraging innovative agri-preneurship through digital farming to improve the livelihood of farmers in rural areas.

JOINT RICE HARVEST AS PART OF THE INDOFINANCE RESEARCH PROJECT

ICASEPS participated in a joint rice harvest event held in Bangunsari Village, Pamarican Sub-district of Ciamis District, on 24 March 2022. This event is part of the collaboration research

activity between ICASEPS, ACIAR, and IFPRI, which is represented by PT Mitra Asia Lestari. Hosted by PT Mitra Desa Pamarican (MDP) as a research partner, the joint harvest was also accompanied by the Agriculture and Food Security Service of Ciamis District. This event is a follow-up activity to the IndoFinance project entitled "Innovative and Inclusive Agricultural Value Chain Financing." This collaboration is to prepare a financing model for agricultural businesses to support food security in Indonesia. This research is looking for a more appropriate credit scheme or loans to selected and qualified farmers. With action research on rice, this research is expected to have strong information to draw recommendations on farm finance mechanisms that provide an advantage for farmers. This joint rice harvest event also aims to obtain information related to good agriculture practices to increase crop productivity and improve the income of farmers/farmer groups.

This event, mainly participated by the farmers, began with a symbolic rice harvest and continued with the following programs.

- After the welcoming speeches by the Director of PT MDP, the Agriculture and Food Security Service of Ciamis District, and the representative of the Head of ICASEPS, there was a symbolic purchase order of grain from the Director of PT MDP to the farmer group and the announcement of harvested rice sample result.
- Testimonial speeches were delivered by the farmers and those involved in this action research before it officially closed, with a strong remark that this financial model could be expanded to cover not only rice farmers but also other strategic crops in the area.

This event was also attended by other interested parties, and it was broadcasted live via a virtual zoom facility.

ACIAR, APPERTANI, AND ICASEPS COLLABORATION ON COFFEE QUALITY IMPROVEMENT AND HONEY BEE CULTIVATION TRAINING BY INDOGREEN RESEARCH PROJECT



ICASEPS, in collaboration with ACIAR and the Indonesian Agricultural Research Alliance (APPERTANI), held a training titled "Improving Coffee Quality and Honey Bee Cultivation" in two villages in West Java Province, namely Lebakmuncang Village, Ciwidey Sub-district of Bandung District on 23–24 March 2022 and the second at Mukapayung Village, Cililin Sub-district, West Bandung District on 26–27 March 2022.

The training activity is part of an action research activity funded by ACIAR entitled "Agricultural Policy Research to Support Natural Resource Management in Indonesia's Upland Landscapes" (IndoGreen). This is collaborative research between several institutions in Indonesia and several universities in Australia. The training, which carries the theme "Coffee & Honey in synergy, Prosperous Farmers, Sustainable Natural Environment," aims to provide training participants with knowledge and skills to produce quality rice coffee and cultivate honey bees. The cultivation of honey bees in coffee plantation areas will increase coffee productivity. Proper and correct harvest and post-harvest techniques will produce quality coffee beans so that the selling price is higher. The synergy of coffee cultivation and honey bees is likely to increase farmers' income so that their welfare will gradually improve. This activity also supports the successful implementation of the national program Citarum Harum, the program to reserve the Citarum River.

WELCOME

Dr. Agung Hendriadi



On 2 August 2021, Dr. Agung Hendriadi was confirmed to take the position as the highest-ranking researcher and placed at ICASEPS. Previously he was a researcher at the Agricultural Mechanization Research Institute of the Ministry of Agriculture. He was then appointed to several strategic structural positions at the Ministry level, including his appointment as Director General of the Food Security Agency, the post he held until 29

April 2021. We warmly welcome Dr. Agung Hendriadi for sharing experiences and developing his career at ICASEPS.

Dr. Abdul Basit



Dr. Abdul Basit served as Director of ICASEPS from 2016 to February 2019. He continued his structural career by being appointed Head of the Planning Bureau at the Ministry of Agriculture, a position he held until 2020. His last position in the bureaucracy was Head of the Center for Library and Dissemination of Agricultural Technology, a position he held until June

2021. Dr. Abdul Basit was then confirmed to occupy the position of the highest planner in accordance with the regulations of the planning functional official. As Senior Planner, which he held since 23 September 2021, he was then re-assigned to work at ICASEPS. We really appreciate his services during his tenure at ICASEPS, and we look forward to working with him on various assignments, especially in agricultural planning and development issues.

ICASEPS WELCOMES 8 NEW OFFICIALS FOR THE CLASS OF 2021

We welcome newly confirmed ICASEPS officials. They were appointed to work at ICASEPS as new employees in accordance with official assignments based on a letter from the Ministry of State Apparatus Utilization and Bureaucratic Reform (PERMENPAN-RB No. 27/2021). The letter stated that 745 candidates had passed the selection to be accepted as candidates for the Civil Servants (PNS) class of 2021 at the Ministry of Agriculture.

The eight candidates who will be officially accepted as ICASEPS staff after a successful one-year trial period are (a) Ms. Riska Nurhafizhah (policy analyst), (b) Ms. Sarah Izzatul Iffah (statistician), (c) Ms. Rizghina Ikhwan (researcher), (d) Ms. Pipit Muthmainnah (computer administrator), (e) Widyadhari Febriani (researcher), (f) Ms. Lidya Rahma Shaffitri (researcher), (g) Ms. Annisa Fauzia Astari (researcher), and (h) Panji Pratama (computer administrator).

We welcome all candidates to join ICASEPS. These young scientists are believed to be able to contribute something according to their respective capacities to improve the performance of ICASEPS further.



PSEKP Tanggap COVID-19

<http://pse.litbang.pertanian.go.id/ind/index.php/covid-19>

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