

Cattle corporation village program as small-scale farmer group empowerment to support National beef self sufficiency

by S Baba

Submission date: 04-Apr-2023 02:21AM (UTC+0700)

Submission ID: 2054888039

File name: ttle_corporation_village_program_as_small-scale_farmer_group.pdf (437.37K)

Word count: 5591

Character count: 30671

PAPER · OPEN ACCESS

Cattle corporation village program as small-scale farmer group empowerment to support National beef self sufficiency

9
To cite this article: A Suganda *et al* 2022 *IOP Conf. Ser.: Earth Environ. Sci.* **1114** 012041

2
View the [article online](#) for updates and enhancements.

You may also like

- [Method for evaluating the polarization performance of cylindrical vector polarized beams](#)
Ruyi Zhou, Linglin Zhu, Tiecheng Liu et al.
- [Structural characteristics of polysaccharide microcapsules from *Nostoc commune*, and their applications in skin wound healing and pathological repair](#)
Yonggang Wang, Chenliang Wang, Jing Dang et al.
- [Determination of Cd²⁺ in aqueous solution using polyindole-Ce\(IV\) vanadophosphate conductive nanocomposite ion-selective membrane electrode](#)
Asif Ali Khan, Mohd Quasim Khan and Rizwan Hussain



245th ECS Meeting
San Francisco, CA
May 26–30, 2024

PRiME 2024
Honolulu, Hawaii
October 6–11, 2024

Bringing together industry, researchers, and government across 50 symposia in electrochemistry and solid state science and technology

Learn more about ECS Meetings at <http://www.electrochem.org/upcoming-meetings>

ECS Save the Dates for future ECS Meetings!

Cattle corporation village program as small-scale farmer group empowerment to support National beef self sufficiency

A Suganda¹, D Salman², S Baba³, I M Fahmid²

¹ Doctoral Program in Development Studies, Graduate School, Hasanuddin University, Makassar, Indonesia

² Department of Agricultural Socioeconomic, Faculty of Agriculture, Hasanuddin University, Makassar, Indonesia

³ Faculty of Animal Husbandary, Hasanuddin University, Makassar, Indonesia

Corresponding author: agungsugandapertanian@gmail.com

Abstract. Government of Indonesia has implemented various programs to increase cattle population and beef production. In 2020, Directorate General of Livestock and Animal Health Services, Ministry of Agriculture has introduced Cattle Corporation Village Program (CCVP). The study aims to identify the capability of small-scale farmer group empowered by CCVP on good farming practices, availability of forage, utilization of infrastructure and colony cages, and corporate institution formed by farmers. The study was located at Cianjur District in 2022. The primary and secondary data were obtained by survey and interview that analyzed by qualitative descriptive. The results of the study indicate: (1) capability of farmer is encouraged to develop good farming practices with business scale; (2) the productivity of cattle should be supported by the sufficiency of forages and additional concentrate; (3) facilities has been provided by CCVP utilized by farmers, however the improvement of some facilities may required; and (4) CCVP is designed as profitable integrated corporation farming for small-scale farmers with upstream to downstream business integration. Through the CCVP, farmers are empowered and assisted in implementing good farming practices with business-scale. In addition, they will obtain some support from various institution and stakeholders to increase their income and welfare.

1. Introduction

Livestock is one of the sub-sectors with a strategic role in agricultural development, especially in supporting the achievement of national food security. This sub-sector is one of the sources of animal protein needed by the community, hence, it has a big influence on fulfilling food needs. It also plays a role in poverty alleviation particularly as a source of income for farmer households [1].

One of the livestock sub-sector products which is an essential food supply and animal protein source is beef. The beef adequacy and accelerated self-sufficiency program have not succeeded in overcoming the problem of the lack of availability of local beef in the country culminating in massive import activities. Based on statistical data, the value of imports for the 2019-2021 period decreased by 51.92% [2], but domestic beef production is still not sufficient to meet national needs. Therefore, great



Content from this work may be used under the terms of the Creative Commons Attribution 3.0 licence. Any further distribution of this work must maintain attribution to the author(s) and the title of the work, journal citation and DOI.

Published under licence by IOP Publishing Ltd

effort is needed in increasing the population and livestock production to support food availability, especially beef.

The success of increasing the production and population of national beef cattle cannot be separated from the acceleration of government programs, including the Upsus Siwab (Acceleration of the Population of Pregnant Cows and Buffaloes) and the Sikomandan (Buffalo Cow Commodity Mainstay of the Country) Program, which are carried out intensively. Furthermore, to accelerate the increase in cattle population and farmer family income, the Directorate General of Livestock and Animal Health has compiled a priority activity in the form of the 1000 Cattle Village Program in 2020 later named the Cattle Corporation Village or CCVP in 2021. The Cattle Village is carried out in five locations, followed by the CCVP in 9 locations in 2021. The program is implemented by integrating cattle development with farming areas based on farmer corporations.

The CCVP is carried out as one of the steps to overcome dependence on beef imports by increasing the population and productivity of cattle in smallholder farms. Based on data from the Central Statistics Agency (BPS) and the Directorate General of Livestock and Animal Health Services in 2022, the current demand for beef is approximately 695.39 thousand tons, the production is 436.7 thousand tons, consumption is 2.53 kg/capita/year, and the population is 274 million. When the demand is reduced by production, there will be a meat production deficit of 258.69 thousand tons or 37.2%, equivalent to 1.43 million heads [2]. To overcome the dependence on beef imports, there is a need to strengthen various sectors, such as through the CCVP.

The CCVP is intended to unite farmers who generally raise livestock with 1-3 heads at home into one structured institutional forum with the concept of a livestock business. The program aims to: (a) increase the population in beneficiary locations; (b) increase the scale of farm household businesses; (c) increase the production of animal protein; (d) increase added value and competitiveness for the sustainability of the beneficiary's business; and (e) institutional strengthening of farmers through access to technical guidance, information, capital, facilities, infrastructure, as well as processing and marketing.

One of the locations of the CCVP is in Cianjur Regency, West Java, therefore, this study aims to identify the ability of small-scale farmer groups empowered by the CCVP in breeding and fattening cattle, the availability of forage at the location of the beneficiary groups, the utilization of infrastructure and support for group cages, and the institutional corporation formed by the group.

2. Material and Method

2.1 Theoretical framework

CCVP is a new program that started in 2020 but there has been no publication on the analysis of the institutional potential of cattle farmers including resources and norms to support its success in accordance with the expected goals. Cattle farmer institutions generally have a small business scale with 1-3 cattle ownership and are a side business also, there is no interconnection with other groups in the form of corporate institutions. Therefore, study related to institutional and empowerment aspects of cattle farmer groups are needed.

In the CCVP, there is a pattern of empowering cattle farmer groups to form an integrated agribusiness-oriented livestock corporate group institution from upstream to downstream. This is consistent with a previous study [3] showing that efforts to intensify small-scale livestock enterprises, by separating their components from the agricultural system as a whole have not been successful, hence, a good and integrated institution is needed. Practically, the expected benefits are: (a) it can produce a form of institutional interconnection in supporting the sustainability of the cattle corporate group, (b) contribute ideas to policymakers in the Ministry of Agriculture and Regional Governments in the preparation of empowerment programs for smallholder cattle farmers in accordance with real needs and conditions in the field, and (c) encourage the institutional formation of smallholder cattle farmer groups that have the ability and corporate-based entrepreneurial competencies with agribusiness orientation.

2.2 Data types and data sources

This study was conducted in Cugenang and Gekbrong Sub-districts, Cianjur Regency, West Java, from January to March 2022. The types of data collected included primary and secondary. Primary data were collected by survey methods and in-depth interviews with key informants, namely 15 farmers from 5 groups who were recipients of the CCVP, representatives of the Livestock Services Office of Cianjur Regency, and program assistants from the Directorate General of Livestock and Animal Health Services Jakarta. Meanwhile, secondary data were collected from the Livestock Services Office of Cianjur Regency, the Directorate General of Livestock and Animal Health Services, the Ministry of Agriculture, as well as the Central Bureau of Statistics.

2.3 Data analysis

The analytical method used was the quantitative-qualitative descriptive method, the quantitative analysis was carried out by calculating the trend of the population development related to beef cattle in Cianjur Regency and farmer groups of CCVP recipients. The study was carried out through limited discussions with key informants and stakeholders involved. Synthesis of data and information from the literature review were used as the material for formulating policy recommendations.

3. Results and Discussion

3.1. Description of the cattle corporation village program

The Ministry of Agriculture has continued to encourage efforts to increase the cattle population such as through the CCVP. This program is a follow-up to the Order of the Minister of Agriculture number 129/KP.410/M/8/2020 dated August 19, 2020. It involves integrating the development of native or local feeder cattle with imported Brahman Cross heifers through the development of farming areas based on farmer corporations. As of 2020, it has been implemented in five regencies, namely Probolinggo, Central Lombok, Ngada, Central Lampung and Gowa. Subsequently, it was extended to nine regencies in 2021 namely Aceh Besar, South Solok, Banyuasin, Cianjur, Boyolali, Kediri, North Penajam Paser, Sidrap and Morowali. This has synergized with the grand design of the National Medium-Term Development Plan and the Ministry of Agriculture's 2020-2024 Strategic Plan.

The CCVP recipients are determined based on the selection of prospective recipients and locations (CP/CL) consisting of a combination of farmer groups residing in village-based areas in accordance with the location and the criteria for beneficiary groups as stated in the Director General's Decree no. 9548/Kpts/PK.010/F/07/2021 July 21, 2021, concerning Technical Guidelines for Cattle Corporation Village Development Programs and Activities. Each selected province proposes five combined groups/farmers in five villages, one village one group in 1-2 sub-districts in 1 selected district according to the potential of the area. According to Djealu et al [4], farmer group membership plays an important role in supporting institutional sustainability. Institutions have different requirements to become a member. The general requirements for membership include: (a) Local villagers, (b) Having an honest attitude, (c) Good character, (d) Willing to follow the agreed group rules, (e) Agreeing and participating in all group activities, (f) Attending regular meetings, and (g) Submitting basic, mandatory, voluntary, as well as contributions regularly in accordance with the agreed amount and time. In this case, the institution is one of the important factors in the framework of system development and livestock agribusiness. Institutional Theory is based on the idea namely, to survive, organizations need to convince the public that they deserve support. Furthermore, the institutional theory according to [5] is a coherent whole that includes a world view (ontology) as well as knowledge derived from the relationship between subjects and objects (epistemology).

The location of CCVP activities in Cianjur Regency is in the Cugenang and Gekbrong sub-districts which consist of five livestock groups as members of the Mekar Suryakencana Cattle Producer Cooperative.

Table 1. CCVP Recipient Livestock Groups in Cianjur Regency.

No	Group Name	Chairman	Member	Address
1.	Sakalam Jaya	Asep Hamdani	20	Sarampad Village, Cugenang Sub-district
2.	Sari Tani	Dedi Setiadi	15	Wangunjaya Village, Cugenang Sub-district
3.	Sumber Arum	Ceceng Sumarna	20	Talaga Village, Cugenang Sub-district
4.	Gede Harepan	Uden Suherlan	30	Gekbrong Village, Gekbrong Sub-district
5.	Makmur	Rizki	20	Cikahuripan Village, Gekbrong Sub-district

The types of livestock developed are local feeder cattle and imported Brahman Cross heifers with the qualifications and specifications as stated in the technical instructions. Each group in five villages received 100 feeders and 100 heifer cattle. In addition, each group has also received assistance packages for livestock production facilities in the form of (a) medicines; (b) heifers processed feed; (c) fattening processed feed; (d) feed processing equipment and machinery; (e) assistance for the construction of communal cages; (f) biogas processing facilities and infrastructure; as well as (g) digital scales for livestock. Each group also received technical guidance implemented in five themes, namely: (a) corporate; (b) livestock agribusiness; (c) livestock breeding; (d) livestock fattening; and (e) livestock waste management.

3.2. Potential of beef cattle population in Cianjur regency

The population of beef cattle in Cianjur Regency is increasing rapidly as is the case in West Java Province by approximately 3.73% per year. In 2017, the population in Cianjur reached 38.37 thousand heads, then increased to 41.09 thousand heads in 2019 and became 44.43 thousand heads in 2021. The average range of beef cattle population share in Cianjur Regency to West Java is between 9.47%-11.02% as shown in Table 2. The availability of livestock population data is very important in accordance with the statement of Sinjal [6] that the availability of correct and concrete cattle population data can provide a better multi-year projection based on domestic livestock resources to achieve food security.

Table 2. Beef Cattle Population Development in Cianjur Regency, West Java, 2017-2021^a

Year	Cianjur	West Java	Share of Cianjur toward West Java (%)
2017	38,374	405,334	9.47
2018	39,902	405,803	9.83
2019	41,086	412,121	9.97
2020	43,268	392,590	11.02
2021	44,431	415,036	10.71
r (%/year)	3.73	0.15	3.59

^a Source: Statistik (2022).

3.3 Identification of farmer groups

The maintenance of beef cattle in Cianjur Regency is carried out by both individual businesses and farmer groups, who are majorly small-scale farmers. As of 2022, based on information from the Livestock Services of Cianjur Regency, 212 groups of beef cattle farmers have been recorded. The number kept by individuals and groups varies between 2-10 heads/individual farmer and for groups ranging from 20-380 heads.

From institutional experience, beneficiary groups vary based on the time of group establishment. Some groups have been formed for a long time, while some are new to obtaining the Cattle Corporation

Village Program. This information can be used as an indicator of the successful implementation of the Cattle Corporation Village Program because indirectly, the age of the farmer group is related to the experience of farming, and the stability within the group is mainly related to organizational management, group dynamics, and interpersonal relationships. The involvement of gender equality disability and social inclusion (GEDSI) only exists in 4 groups namely Sari Tani, Sumber Arum, Sakalam Jaya, and Gede Harepan with one woman each involved as an administrator with secretarial, treasurer, and administrative positions. Some members of the beneficiary group are farmers who work part-time raising cattle or other livestock at home.

At the study location of the CCVP, the types of livestock assistance provided were Brahman Cross heifers and local feeder cattle. Each group was given 100 feeder and 100 heifer cattle, while the development of the cattle population in each farmer group in July 2022 ranged from 102-156 heads as shown in Table 3.

Table 3. Development of Beef Cattle Raised in the Livestock Group of the CCVP in Cianjur Regency, 2022. (head)

No.	Farmer's Group	Initial population (March 2021)			Current population (July 2022)		
		Female	Male	Total	Female	Male	Total
1.	Sakalam Jaya	100	100	200	93	60	153
2.	Sari Tani	100	100	200	100	2	102
3.	Sumber Arum	100	100	200	97	13	110
4.	Gede Harepan	100	100	200	96	60	156
5.	Makmur	100	100	200	100	56	156

The decline in the male population was caused by their sale during the Eid al-Adha (Day of Qurban) celebration, wherein the proceeds were used to cover loan capital and to purchase prospective new calves. Moreover, an outbreak of Foot and Mouth Disease that occurred in April 2022 led to restrictions on livestock traffic. The process of buying new prospective calves to replace feeder cattle sold is faced with problems, hence, the population of feeder cattle is greatly reduced. It was also reported that several cattle died due to illness and poor management. The ability and experience of farmers in dealing with mortality are still low due to the lack of knowledge and background in handling a large number of cattle. In general, farmers who are members of the CCVP livestock group are small-scale farmers with 2-3 livestock ownership per farmer, hence they do not have experience raising livestock in large numbers and groups, especially Brahman Cross cattle. Farmers raise livestock as a side business in addition to the main business of rice farming, hence, assistance is needed from the institutions or related agencies, especially in carrying out good management of the livestock business.

The cages for the livestock business activities of the CCVP group are made jointly on a stretch of land either owned by the head of the farmer group or village land. Members of the farmer group are divided into 2 sub-groups, namely those who have the task of looking for grass as forage for animal feed, or plant waste such as rice straw and leftover corn leaves that have been harvested (cut down) as well as those with the task of cleaning the cage and cattle, providing water, and controlling the conditions around the barn. Farmers who have the task of finding animal feed also provide forage or animal feed to the livestock being cultivated.

3.4. Availability of forage for animal feed

The feed production system in Indonesia can be classified into three categories, namely: (a) limited land (landless), (b) crop-based cultivation (crop-based); and (c) rangeland-based [7]. Cattle farming is inseparable from the need for feed, hence, it is necessary to utilize the availability of local feed ingredients including bran, oil palm cake, palm kernel cake, coffee cake, cocoa cake, and agricultural by-products such as rice and corn straw which can be used as an alternative to feed ingredients based on the potential of local feed resources that are managed efficiently by using mechanization facilities.

The availability of animal feed in Cianjur Regency will support the expected increase in the population of ruminants, especially beef cattle, with efforts to utilize unused or grazing land by livestock groups. The potential area of Pangonan in Cianjur Regency is 1,304 ha; when each hectare of land produces 3 tons per hectare, then there will be potential for forage up to 3.90 thousand tons. According to [3], the hallmark of the Indonesian agricultural system is the close integration and interdependence between various biophysical components including livestock, soil, plants, and forage; resources comprising area and quality of land, feed supply, labor, cash availability; as well as social. Forage cultivation is the targets of production development to provide large animal feed, especially for beef cattle, which in turn is expected to increase the capacity of the region for livestock units. The types of superior grass currently planted by many farmers include King Grass, Setaria, and *Brachiaria descumbent*. Furthermore, rice plant waste (straw) and leaves/stems of corn plants also have the potential to be used as animal feed. In 2021, the forage potential of the rice harvested area reached 115,661 ha, and corn harvested area was 5,600 ha.

Conditions related to the activity of providing forage at the location of the CCVP in Cianjur Regency include (a) the group has HPT land covering an area of 3-10 ha, with the types of Sulamjana, elephant, and odot/merker grass, (b) forage feed needs are assisted by UPTD (Department of Technical Implementation Unit) Bunikasih Dairy Cattle, West Java Province, (c) the need for forage feed in each group comes from agricultural waste such as rice straw, corn plants, cassava and tofu dregs in the surrounding area, and (d) Utilization of industrial residues in the form of soy sauce waste from PT Indofood as a concentrated mixture. Based on these data, the use of land for HPT planting in the CCVP area of Cianjur Regency is not yet optimal, as there are still several vacant lands and the understanding of farmers about the nutritional intake needs of livestock is lacking. Efforts to improve the quantity and quality of feed provided must be increased by selecting and planting superior types of grass intensively to fulfill the nutritional adequacy of the livestock being kept as well as applying technology for preserving and processing forage. Usually, the most important constraint is the limited availability and quality of feed, especially during the dry season, while others include poor knowledge and capacity of feed management [8].

3.5. Support for livestock business facilities/infrastructure

All facilities and infrastructure provided are being used by farmers, but some need adjustments such as the grass chopper capacity which is too small for grass needs for 200 cattle, the need for concentrate-making machines to ensure the availability of concentrate feed in the group, poor biogas facilities caused by insufficient capacity and socialization of biogas utilization has not been maximized. Despite the potential as well as social and environmental benefits, biogas technology faces low adoption rates among smallholder farmers in developing countries [9,10]. This can slow down the rate of the technology deployment process among potential users [11]. The speed of technology diffusion is actually characterized by the expected benefits of the technology available for farmers [12,13]. Relatively high complexity and great risk often lead to slow technology diffusion among farmers [14]. Furthermore, most smallholder farmers in developing countries are more likely to adopt new technology when they observe that their neighbors benefit positively [15].

The CCVP involves the application of an integrated livestock area development system which maximizes existing local potential through corporations that synergize and collaborate between parties from upstream to downstream. In this program, there is intensive livestock business assistance by relevant stakeholders carried out to empower farmer groups, such as optimizing livestock production, access to finance for People's Business Credit (KUR), partnership programs or other credit schemes affordable by farmers. This assistance is in line with [16,17] which requires active participation from smallholder households and access to expert mentoring teams that involve joint investigations, development, and extension activities as well as multi-disciplinary system analysis.

In the context of empowering cattle farmer groups in the study locations, with the CCVP, several empowerment activities play a significant role in increasing the income of the cattle group, including:

- a) Business consolidation, in the form of empowerment related to the main business carried out by farmers in terms of cultivation and fattening of beef cattle, with the main production being feeder cattle fattening. This activity begins with the construction of a stimulant capital cage and a loan from a bank, with each group having a different capital loan according to their ability. The main focus in implementing the business plan is to fatten the existing feeder cattle to help the operations of Brahman Cross broodstock cultivation as well as for the group's benefit.
- b) Business development activities are carried out by providing concentrates for group needs. The Sari Tani group can produce its own concentrates, but their capacity is still small due to constraints with limited raw materials while some imports products require large business capital.
- c) Utilization of animal manure as raw material for biogas and directly as organic fertilizer by horticultural farmers. In the Sari Tani cattle farmer group with total cultivation of 380 cattle, the livestock manure obtained is used as a medium for worms, which are then sold for pharmaceutical needs with monthly income reaching IDR 4.5 million. Meanwhile, from livestock manure, there is also a biogas process that can save gas fuel costs by up to 50%.

3.6. Analysis of corporate institutional aspects in the cattle corporation village program

Currently, almost 95% of the cattle population is cultivated by small-scale farmers, wherein livestock is a subsystem/sideline business on a micro-scale. Approximately 4.73 million cattle farmer households live in rural areas with ownership of between 2-4 cattle per farmer. Therefore, it is necessary to strengthen the farmers' corporate management system with a strategic dimension in the development of agricultural areas. This is regulated by the Minister of Agriculture Regulation Number 18/Permentan/RC.040/4/2018 concerning Technical Guidelines for the Development of Farmers' Corporation-Based Agricultural Areas.

The farmer groups receiving the CCVP in Cianjur Regency consist of five groups, namely the Sari Tani, Sakalam Jaya, Sumber Arum, Makmur, and Gede Harepan. These groups are generally formed only when they will receive the CCVP. In general, group members only have experience raising 1-3 cattle at home but not in organizing an institutional farmer group to raise cattle in a colony. Each group consists of between 15-30 individuals who rear livestock as a sideline business because they are majorly rice farmers. To assist the five groups in running the business of procuring animal feed inputs, providing prospective feeders, and selling livestock products (beef cattle), the Mekar Suryakencana Cattle Producer Cooperative was formed with a Notarial Deed Number 90 dated December 23, 2021.

The management comprises heads and administrators of the five livestock groups with very minimal experience. The institutionalization of the Mekar Suryakencana Cooperative in Cianjur Regency can optimally run a livestock business as a corporation with assistance from local technical assistants, the Regional Government, and also the University. Assistance is provided in the form of optimizing productivity in the area of livestock technology innovation; corporate-based institutional management, development of business plans and action plans; access to finance for People's Business Credit (KUR) or other credit schemes affordable for breeders; partnership program with off-takers in developing a wider marketing network, and policies in the field of animal husbandry. With conditions in tropical countries, farmers need the role and involvement of stakeholders in controlling policies, resources, and access in the livestock sector [18-22]. It is expected that through the CCVP the farmers raising livestock on a part-time basis with a scale of 1-3 heads can be empowered through the establishment of farmer group institutions. By joining the group, the scale of livestock ownership will increase, thereby facilitating the achievement of business-oriented livestock enterprises. Institutional groups are also expected to develop livestock production businesses, product processing, feed business, and access to integrated marketing to improve the welfare of farmers. Cattle rearing by this integrated group is also expected to encourage an increase in the production in Cianjur Regency and all locations of the CCVP. Besides, the increase in production can substitute or reduce the importation of beef to fulfill national needs.

In the context of broad agricultural business development including animal husbandry, a previous study by [24] stated that the development of these businesses cannot be separated from the involvement

of all stakeholders comprising the government, private, and community, as well as local institutions [25] with various involvements and coordination among related institutional actors [26,27]. Similarly, another study [28] stated that in the development of organic agriculture, knowledge, and skills are needed among farmers as a source of strength and authority to turn knowledge into social practice and then gradually into social reality.

4. Conclusions

The CCVP in Cianjur Regency can be implemented by integrating native/local feeder and imported heifer cattle with the development of farming areas based on farmer corporations. In general, members of the program are small-scale farmers, they are empowered and encouraged to implement good livestock farming practices. Furthermore, they are also supported to develop their business scale through integration from upstream to downstream by implementing an integrated livestock corporation area. Increasing the productivity of heifer and feeder cattle must be supported by the availability of feed in the form of forage and additional concentrates. The availability of forage fodder at the CCVP location in Cianjur Regency is obtained through the use of a large area of vacant or grazing land as well as agricultural by-products which are managed efficiently by the application of mechanization. All the facilities and infrastructure provided have been used, but some need to be improved according to the conditions and needs of the farmers in the recipient group. The CCVP is designed to form an integrated livestock business that implements good management and upstream-downstream scale to improve the welfare of farmers. Farmer groups are assisted and encouraged to create corporate institutions with business entities that can access business credit financing and wider marketing through collaboration with off-takers. The success of beef cattle development in the CCVP will promote an increase in livestock population and productivity in Cianjur Regency, allowing the fulfillment of national needs and reducing dependence on imports.

Acknowledgment

The authors would like to thank the Directorate General of Livestock and Animal Health Services Ministry of Agriculture, Republic of Indonesia to has fully supported data for this study.

References

- [1] Kementerian Pertanian 2021 *Petunjuk Teknis Program dan Kegiatan Pengembangan Desa Korporasi Sapi*. Jakarta
- [2] Statistik B P 2022 *Peternakan dalam Angka 2022*. Jakarta
- [3] Stür W W, Home P M, Hacker J B, Kerridge P C 2000 *Working with farmers: the key to adoption of forage technologies in: ACIAR, Canberra, Australia* ACIAR Proceedings. **95**
- [4] Djelau I, Panjaitan P B, & Susdiyanti T 2014 *J. Nusa Silva* **14** 43– 54
- [5] Carvalho A D P, Cunha S K, Lima L F de & Carstens D D 2017 **14** 250–259
- [6] Sinjal D 2011 *PSDS 2014 dengan Input Data yang Benar* AGRINA Online [online], available: http://www.agrina-online.com/show_article.php?rid=20&aid=2860
- [7] Devendra C, Lee Kok T, Pathmasingham M 1973 *Malaysian Agricultural Journal* **49** 183–191
- [8] Lisson S, Macleod N, McDonald C, Corfield J, Pengelly B, Wirajaswadi L, Rahman R, Bahar S, Padjung R, Razak N, Puspadi K, Sutaryono Y, Saenong S, Panjaitan T, Hadiawati L, Ash A, Brennan L 2010 *J. Agricultural Systems* **103** 486–497
- [9] Mwirigi J, Balana B B, Mugisha J, Walekhwa P, Melamu R, Nakami S 2014 *J. Biomass-Bioenergy* **70**:1
- [10] Tigabu A D, Berkhout F, Van Beukering P 2015 *Technol Forecast Soc Change* **90** 318–30
- [11] Mengistu M G, Simane B, Eshete G, Workneh T S 2015 *Renew Sustain Energy Rev* **48** 306–16
- [12] Rogers E M 2003 Edition Fifth editors. *Diffusion of Innovations*. New York. USA: The Free Press, A Divison of Simon and Schuster, Inc
- [13] Burton M, Rigby D, Young T 1999 *J Agric Econ.* **50** 47–63
- [14] Batz F J, Peters K J, Janssen W 1999 *J. Agric Econ.* **21** 121–30

- [15] Case A 1992 *Reg Sci Urban Econ* **22** 491–508
- [16] Home P M and Stür W W 2003 *ACIAR Monograph* **99** 120 pp
- [17] Shelton H M and Peters F M 2005 *Adoption of tropical legume technology around the world: analysis of success. In: McGilloway, D.A. (Ed.), Grassland: a Global Resource*. Wageningen Academic Publishers, The Netherlands, pp. 149– 166
- [18] Phuong N V, Hanh D T M, Cuong T H, Markemann A, Valle Zarate A, Mergenthaler M 2014 Impact of quality attributes and marketing factors on prices for indigenous pork in vietnam to promote sustainable. *Utilization of Local Genetic Resources* **26** (5)
- [19] Leroy G, Baumung R, Notter D, Verrier E, Wurzinger M, Scherf B 2017 *J. Livest. Sci.* **198** 120–128
- [20] Phiri R E 2012 *J. Rural Dev.* **24** 2588
- [21] Bryson J M 2007 *Publ. Manag. Rev.* **9037** 20–53.
- [22] Govoeyi B, Ahounou S G, Agbokounou A M, Salifou C F A, Dotche I O, Kiki P S, Youssao A K I, Moussiaux N 2019 *J. Agric. Syst.* **174** 11–22
- [23] Devitt C, Boyle L, Teixeira D L, O’Connell N E, Hawe M, Hanlon A 2016 *Ir. J. Vet.* **69** 1–4
- [24] Azizah N, Bulkis S, Fahmid I M, Arsyad M, Asthutiirundu, Sabang Y 2020 *Int. J. of Educ., Inf. Tech. And Others (IJEIT)* **3** 470-483
- [25] Pawalluri T, Salman D, Fahmid I M, Marmin H, Amir A, Enre A A 2021 *J. Etnografi Indonesia* **6** 116-124
- [26] Jumiati, Ali M S S, Fahmid I M, Mahyuddin 2019 *J. of Engineering and Applied Sci.* **14** 1860-1866
- [27] Fahmid I M, Wahyudi, Salman D, Kariyasa I K, Fahmid M M, Agustian A, Perdana R P, Rachman B, Darwis V, Mardianto S 2022 *Frontiers in Sustainable Food Systems* **6** 821330
- [28] Wardah S, Salman D, Agustang A, Fahmid I M 2017 *Mediterranean J. of Soc. Sci.* **8** 245-252

Cattle corporation village program as small-scale farmer group empowerment to support National beef self sufficiency

ORIGINALITY REPORT

12%

SIMILARITY INDEX

%

INTERNET SOURCES

12%

PUBLICATIONS

7%

STUDENT PAPERS

PRIMARY SOURCES

- 1** Submitted to Universitas Sebelas Maret 4%
Student Paper
- 2** P Harjanto, I M Fahmid, S Ali, E B Demmallino. "Institutional development of farmers through agricultural area-based corporations in Indonesia", IOP Conference Series: Earth and Environmental Science, 2022 1%
Publication
- 3** R. Ahmad Romadhoni Surya Putra, Zhen Liu, Mogens Lund. "The impact of biogas technology adoption for farm households – Empirical evidence from mixed crop and livestock farming systems in Indonesia", Renewable and Sustainable Energy Reviews, 2017 1%
Publication
- 4** Shaun Lisson, Neil MacLeod, Cam McDonald, Jeff Corfield et al. "A participatory, farming systems approach to improving Bali cattle production in the smallholder crop–livestock

systems of Eastern Indonesia", Agricultural Systems, 2010

Publication

5

Submitted to East Carolina University

Student Paper

1 %

6

Sasaki, Michihito, Agus Setiyono, Ekowati Handharyani, Ibenu Rahmadani, Siswatiana Taha, Sri Adiani, Mawar Subangkit, Hirofumi Sawa, Ichiro Nakamura, and Takashi Kimura. "Molecular detection of a novel paramyxovirus in fruit bats from Indonesia", *Virology Journal*, 2012.

Publication

<1 %

7

Hasim Ashari, Imam Mujahidin Fahmid, M. Saleh S. Ali, Daniel Useng et al. "Policy urgency and development of the highest retail price (HRP) of subsidised fertilizer", *E3S Web of Conferences*, 2021

Publication

<1 %

8

Arief Ramadhan, Aniati Murni Arymurthy, Dana Indra Sensuse, Muladno. "Modeling e-Livestock Indonesia", *Heliyon*, 2021

Publication

<1 %

9

A Setiawan, A Ramdhon, L A Utami. "Establishing a co-design framework for disaster mitigation agenda in the urban context. A case study: SIBAT Solo", *IOP*

<1 %

Conference Series: Earth and Environmental Science, 2022

Publication

10

Ramadhan. "SUCCESS FACTORS FOR E-LIVESTOCK: AN E-GOVERNMENT INITIATIVE", *Journal of Computer Science*, 2013

Publication

<1 %

11

E Yulianti, R Mahmudah, S N Khalifah, A Prasetyo, A S Irviyanti, A F Romadhoni, G P Yudisputra. "Modification of corn stalk using citric acid as biosorbent for methylene blue and malachite green", *IOP Conference Series: Earth and Environmental Science*, 2020

Publication

<1 %

12

Submitted to University of Adelaide

Student Paper

<1 %

13

Agustina Abdullah, Jamila Mustabi, Aslina Asnawi, Muh Hatta Jamil. "Strategy analysis of extension of performance in transfer of livestock technology innovation for farmer empowerment", *IOP Conference Series: Earth and Environmental Science*, 2021

Publication

<1 %

Exclude quotes On

Exclude matches < 9 words

Exclude bibliography On