

STUDY OF ANALYSIS OF COMPOST PROCESSING FARMING AND ITS CONTRIBUTION TO GROUP INCOME IN THE INTEGRATED LIVESTOCK FARMING SYSTEM IN THE MANIK AMERTA FARMER GROUP, TIYING GADING VILLAGE WEST SELEMADEG DISTRICT, TABANAN REGENCY - BALI

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ABSTRACT

The Simantri activity approach is a farming system with a zero waste system, with the hope of optimizing the use of local resources optimally and reducing dependence on external inputs. This study aims to analyze the feasibility of composting and livestock farming businesses and their contribution to income in an integrated pen system in the Manik Amerta Farmer Group, Tiyang Gading Village, West Selemadeg District. The research method uses business feasibility analysis and descriptive methods. The research period starts from October 24 - December 30, 2021. The results of the study showed that the group's income in the cattle breeding business was IDR 2,297,501 per month and the organic fertilizer business was IDR 2,301,800 per month with a business feasibility analysis reaching $(R / C) = 5.42$ (very feasible). The contribution of composting efforts to the income of members and groups reached 50.05%. Optimal management of cattle waste is one of the innovations implemented in the Manik Amerta Farmer Group through the Low external input sustainable agriculture (LEISA) concept, where the output of a cattle farming activity is input for compost processing activities.

Keywords: Compost processing, farm business analysis; income contribution

1. INTRODUCTION

Livestock manure is one of the wastes produced from farmed livestock. Livestock manure has great potential in its utilization and development along with the large number of livestock farmed by the community (Priyanto et al., 2004). Kaharudin and Mayang (2010) stated that fattening cattle with a weight gain of 1.0 kg can produce 25 kg of manure/head/day and is greatly influenced by the amount of feed given. The Simantri activity approach is a farming system with a zero waste system, with the hope of optimizing the use of local resources optimally and reducing dependence on external input. Optimal management of cattle waste is one of the innovations introduced to increase farmer independence in fertilizer. Manik Amerta Farmer Group located in Antagana Hamlet, Tiyang Gading Village, Selemadeg Barat District, Tabanan Regency with 20 members and 42 livestock population in the colony system of livestock integration program assistance in 2014 and Bali provincial government simantri in 2017. Since 2017, it has developed a compost processing business as an effort to increase the value of the members' and group's businesses. The dynamics of processing activities are quite good with indicators of increasing compost processing results from year to year which are increasing. Waste processing efforts carried out by the Manik Amerta Farmer/Livestock Group are quite well-known and have received various awards. However, a detailed study of the analysis of compost processing efforts and livestock farming in an integrated colony/cage system by the Manik Amerta Farmer Group has never been conducted.

This study is expected to provide an overview of the business value and feasibility of livestock farming in an integrated colony/cage system. The aim of the research conducted at the Manik Amerta farmer group, Antagana, Tiyang Gading Village was to analyze the feasibility of compost making and livestock farming in an integrated colony/pen system.

2. RESEARCH METHODOLOGY

2.1. Time and Place

This research was conducted from October 24 to November 30, 2024. It took place at the Manik Amerta Farmer/Livestock Group in Tiyang Gading Village, West Selamadeg District, Tabanan Regency, Bali Province.

2.2. Data collection technique

The population in this study were 20 members of the Manik Amerta farmer/livestock group. The types of data used include primary data and secondary data. Primary data were obtained through observation, interviews, and filling out questionnaires by respondents. Secondary data are data that have been collected by other parties through library studies and literature studies. The primary data collection technique used was structured interviews. The calculation of income from farming activities carried out by the Manik Amerta farmer/livestock group in the organic fertilizer business was carried out by calculating the amount of solid organic fertilizer sales and livestock seed sales / godel at the time this study was conducted. Furthermore, the calculation of livestock business income and final compost processing was divided by the current month.

2.3 Data Analysis Methods

Data analysis used in this study is descriptive analysis and quantitative analysis. Descriptive analysis is used to determine the general picture and explain the costs and income of livestock farming and compost processing businesses at the research location. Quantitative analysis is used for the analysis of costs and income of farming businesses, analysis of the revenue and cost ratio (R/C ratio), and analysis of factors that affect production costs and income of compost processing farming businesses.

3. LITERATURE REVIEW

3.1 Organic Material of Cow Manure

Cow dung is an organic material that specifically plays a role in increasing the availability of phosphorus and microelements, reducing the negative effects of aluminum and providing carbon dioxide to the plant canopy, especially in plants with dense canopies where air circulation is limited. Cow dung contains many nutrients needed by plants such as nitrogen, phosphorus, potassium, calcium, magnesium, sulfur and boron (Brady, 1974, in Sudarkoko, 1992).

Cow dung contains a lot of microbes because cattle have a special digestive system that uses microorganisms to digest cellulose and lignin from grass or other green plants that have high fiber. The results of the analysis conducted by Bai et al. (2012), stated that the total cow dung microbes reached 3.05×10^{11} cfu/gr and the total fungi reached 6.55×10^4 . The microbial composition of cow dung includes ± 60 species of bacteria (*Bacillus* sp., *Vigna sinensis*, *Corynebacterium* sp., and *Lactobacillus* sp.), fungi (*Aspergillus* and *Trichoderma*), ± 100 species of protozoa and yeast (*Saccharomyces* and *Candida*). The bacteria found in cow dung are mostly cellulose, hemicellulose, and pectin fermenting bacteria.

3.2 Compost and Composting

Compost is an organic material that has undergone decomposition by decomposing microorganisms, in the compost contains mineral nutrients that function to provide nutrients for and improve soil properties. The composting process that occurs naturally takes place over a fairly long period of time, requiring 2-3 months and some even require up to 6-12 months depending on the raw materials (Djuarni et al., 2006).

Composting is the process of biological decomposition of organic matter, especially by microbes that utilize organic matter as an energy source. The principle of composting is to reduce the C/N ratio of organic matter to the same as the C/N of soil, which is between 10-20 (Epstein, 1997). This reduction in the ratio is intended to make it easier for plants to absorb nutrients from the compost.

The composting process can be simply divided into two stages, namely the active stage and the maturation stage (Isroi, 2007). In the active stage, oxygen and easily degradable compounds will be immediately utilized by mesophilic microbes. The temperature of the compost pile will increase rapidly and is followed by an increase in the pH of the compost. The temperature increases to 50 oC - 70 oC for a certain time. Microbes in the compost using oxygen will decompose organic matter into CO₂, water vapor and heat (Rynk, 1992). After most of the material has decomposed, the temperature will gradually decrease. At this time, advanced compost maturation occurs, namely the formation of a clay humus complex.

Factors that affect the composting process are the C/N ratio, particle size, aeration, porosity, humidity, temperature, pH, nutrient content, and hazardous substance content (Isroi, 2007). Making compost is regulating and controlling the natural process so that compost can form faster, including; making a balanced mixture of materials, providing sufficient water, regulating aeration, and adding composting activators. In general, things that need to be considered are:

- a. Preparation of materials; cow manure with sufficient water content and leftover feed that has been cut into 5-10 cm to speed up the decomposition process. As an illustration of the comparison of the composition of the materials as follows: solid cow manure 80% and leftover feed 20%.
- b. Dilution of decomposers with clean water and sugar/molasses. The addition of sugar/molasses aims to add food and accelerate the growth of microbes in the decomposers used. The clean water used is well water, avoid using PDAM water because the chlorine content can kill decomposer microbes. Water requirements range from 30% - 40% of the weight of organic material
- c. Stacking, starting from coarse materials/leftover feed, livestock manure to build a structure that has good aeration and maintained humidity. The thickness between layers is $\pm 15 - 20$ cm and the maximum total stack height is 1.0 meters
- d. Each layer of organic material is sprinkled with the diluted decomposer, which aims to evenly increase the supply of decomposing microbes.
- e. The last step is to cover with plastic to prevent the pile of organic materials from being exposed to direct sunlight and rainwater. This covering also aims to maintain the stability of the atmosphere in the decomposition process.

Important things to note and maintain during the decomposition process (21 days) are (a) humidity is maintained, (b) aeration of the pile is controlled, too aerobic N elements evaporate as NH₃; (c) controlled temperature to help microbial growth, if the pile temperature reaches 50oC the turning process is carried out. During the composting process, there will be a reduction in volume and biomass of the material. This reduction can reach 30 - 40% of the initial volume or weight.

3.3 Compost Processing Farming Business

Farming is an effort by a farmer/group to use natural resources, labor, capital and skills efficiently and effectively in an agricultural business to obtain maximum results. While farming business analysis is the process of recording and calculating the amount of all costs (expenses) required in a production process and the income that will be and/or obtained, as well as the benefits and feasibility of a business.

Business analysis aims to provide an overview of the current state of a business activity and describe the future state of planning or action. Calculation of farming business analysis is very important for us to know and do in order to find out the

amount of capital needed in a process or business, business efficiency efforts, calculate risks or obstacles that may occur and calculate business feasibility. Soehadji (1992) in Saragih (2000) stated 4 typologies of livestock businesses in Indonesia, namely:

1. Livestock Business as a Part-time Business, namely livestock farmers cultivate various kinds of commodities, especially food crops, where livestock is a part-time business to meet their own needs with an income level from livestock farming of less than 30%.
2. Livestock Business as a Branch of Business, namely livestock farmers carry out mixed farming with livestock as a branch of farming business with an income level from livestock farming of 30-70% (semi-commercial).
3. Livestock farming as a main business, namely livestock farmers cultivate livestock as their main business and other agricultural commodities as a side business (single commodity) with an income level from livestock of around 70-100%.
4. Livestock Business as an Industrial Business, namely livestock farmers manage livestock as a special livestock commodity industrial business (specialized farming) with an income level of 100% from the selected livestock business.

4. RESULTS AND DISCUSSION

4.1. Overview of Manik Amerta Farmers Group

4.1.1. Human Resource Potential

Description of group membership based on age and education classification can be presented as follows:

A. Based on age level classification

The members of the Manik Amerta farmer group are dominated by the older generation with ages between 45 and 54 years, as many as 50.0% or reaching 10 people. Details of the classification of members based on age class are presented in the following table.

Table 1. Description of members of the Manik Amerta Farmer Group based on age

No	Member age (years)	Number of people)	Percentage (%)
1	25 - 34	0	0.0
2	35 - 44	3	15.0
3	45 - 54	10	50.0
4	> 55	7	35.0
	Amount	20	100.0

Source: processed primary data, 2024

Based on the table data above, the age distribution of the members of the farmer group is known that from the total number of members as many as 20 people, those aged between 35 and 44 years are 3 people or 15.0%, those aged 45 to 54 years are 10 people or 50.0%, and those aged over 55 years are 7 people or 35.0%.

4.1.2. The potential and system of cattle farming in the Manik Amerta Farmer Group:

The business activities carried out by the Manik Amerta farmer/livestock group were initially limited to breeding cattle farming. Starting with 22 cows assisted by the government through the 2014 integration program, then added with SIMANTRI assistance in 2017 with a total of 20 cattle so that the total livestock managed by the group was 42. The livestock business activities owned by the Manik Amerta farmer/livestock group are carried out in intensive pens built on land owned by one of the group members. Maintenance activities, taking feed and cleaning the pens are carried out individually by group members. During the period 2014 - 2021, of the 42 breeding cattle managed in the integrated pens of the Manik Amerta Farmer Group,

only 22 breeders from the 2014 assistance have produced/produced calves, while the breeders from the 2017 assistance have only entered the gestation period between 3 - 4 months.

4.2 Organic Fertilizer Business Revenue

The total amount of income obtained from this business activity depends on the amount of products sold by the Manik Amerta farmer/livestock group in one period or in one month. Production activities carried out by the Manik Amerta farmer/livestock group are carried out based on the potential of existing solid waste and the workforce they have. The income from the Manik Amerta farmer/livestock group's organic fertilizer business can be seen in Table 2.

Table 2. Production volume and sales value of Manik Amerta Farmer Group compost in 2017 – 2021

Parameter		TAHUN				
		2017	2018	2019	2020	2021
Jumlah Produksi (Kg)		7,764	31,056	34,938	38,820	46,584
Jumlah Penjualan (Kg)		2,300	31,850	25,975	33,737	31,850
Nilai (Rp)		1,840,000	25,480,000	20,780,000	26,989,600	25,480,000

Source: processed primary data, 2024

Table 2 shows that the amount of income obtained by the Manik Amerta farmer/livestock group from the sale of solid organic fertilizer between the period 2017 - 2021 which has been intensively managed is IDR 2,146,296,-/month. The amount of solid organic fertilizer income for one month is obtained from the number of products sold multiplied by the product price of IDR 800.-/Kg.

The income obtained from the sale of organic fertilizer products is obtained from cash payments from fertilizer consumers with the target sales of rice farming communities in Subak Tying Gading and dry land farming communities in the Tying Gading Village area. From this study, it can be seen that the potential for developing organic fertilizer businesses carried out by the Manik Amerta farmer/livestock group has great potential, seen from the income obtained and the marketing pattern carried out quite effectively, namely with the target sales of farmers and farmer groups.

4.3 Income from Cattle Farming Business

The total amount of income obtained from cattle farming business activities depends on the number of livestock seeds / godel sold by the Manik Amerta farmer / livestock group in one production period. Income from the cattle breeding business of the Manik Amerta farmer / livestock group can be seen in Table 3.

Table 3. Number and selling value of livestock seeds sold at the Manik Amerta Farmer Group in 2020

Parameter	Year				
	2017	2018	2019	2020	2021
Male Cattle Seedlings (Tail)	0	6	9	3	3
Female Cattle Seedlings (Tail)	0	10	5	6	2
Number of Cattle Seed Sales (Heads)	0	16	14	9	5
Acceptance Value (Rp.)	0	65,000,000	62,500,000	36,000,000	22,000,000

Source: processed primary data, 2024

Table 3 shows that the amount of income received by members of the Manik Amerta farmer/livestock group from the sale of livestock seeds/godel is Rp. 3,198,275.86,-/month. The amount of income depends on the number of livestock sold multiplied by the market price at that time (assumption; male seeds Rp. 5,000,000/head and female seeds Rp. 3,500,000/head.

4.4 Total Income of Manik Amerta Farmer/Livestock Group Farming Business

The total income of the Manik Amerta farmer/livestock group is the total income obtained from two types of businesses, namely the organic fertilizer business and the cattle breeding business. The total income of the Manik Amerta livestock farmer group can be seen in Table 4.

Table 4. Total amount of business income at the Manik Amerta Farmer Group in 2017 – 2021

PARAMETER	TAHUN				
	2017	2018	2019	2020	2021
Penerimaan penjualan bibit ternak (Rp.)	0	65,000,000	62,500,000	36,000,000	22,000,000
Penerimaan penjualan kompos (Rp.)	1,840,000	25,480,000	20,780,000	26,989,600	25,480,000
Total penerimaan (Rp.)	1,840,000	90,480,000	83,280,000	62,989,600	47,480,000

Source: processed primary data, 2024

The total average income obtained from the period 2017 - 2021 which has been intensively managed is IDR 5,921,450.-/month. From Table 8. it can be seen that the largest income in the livestock breeding business is IDR 65,000,000.- in 2018 and the smallest in 2021 is IDR 22,000,000,-. While the largest income in the composting business is IDR 26,989,600,- in 2020 and the smallest in 2017 is IDR 1,840,000,- because it is still the beginning of production. This is in accordance with the opinion of Asna (2009) who stated that the average income from livestock farming businesses will increase along with the increasing scale of business owned by farmers/breeders.

4.5 Production Costs of Manik Amerta Farmer/Livestock Group Farming Business

Production costs in the business carried out by the Manik Amerta farmer/livestock group are the total costs incurred to obtain an output from production activities in the business carried out. Production costs are related to the income that will be obtained at the end of production, where if the production costs are greater than the income obtained, it will be detrimental to the business carried out, and vice versa. Sukirno (1994) stated that production costs are all expenses incurred to obtain production factors and materials that will be used to create the goods produced.

Production Costs of Compost Making Business

The production costs of the composting business incurred by the Manik Amerta farmer/livestock group are divided into 2, namely cash costs and calculated costs. The amount of production costs in the organic fertilizer business can be seen in Table 5.

Table 5. Production costs of the Manik Amerta Farmer Group composting business in 2021

No.	Uraian	Volume	Harga Satuan	Biaya tunai	Biaya diperhitungkan	Total Biaya	Keterangan
1	Bahan baku pengolahan kompos						
	a Dekomposer Beka (lt)	1	65,000	65,000		65,000	
	b Kantong plastik / kemasan (lbr)	156	1,000	156,000		156,000	
	c Benang jahit (paket)	1	10,000	10,000		10,000	
	d Bahan bakar / bensin (lt)	2	7,600	15,200		15,200	
	e Bahan baku kotoran ternak (2 mgg)	5,880	50		294,000	294,000	kg/proses olah
2	Biaya tenaga kerja (asumsi volume BO yg di olah)						
	a Pencampuran bahan organik + starter kompos (tinggi tumpukan maks 1 m)	20	35,000		700,000	700,000	
	b Pembalikan (mgg 3)	10	35,000		350,000	350,000	1/2 tim lainnya buat lot baru
	c Memindahkan bahan organik dari bak pendinginan (mgg 5)	10	35,000		350,000	350,000	1/2 tim lainnya pembalikan lot baru
	d Pengayakan dan pengemasan (mgg 6)	20	35,000		700,000	700,000	
	Total Biaya			246,200	2,394,000	2,640,200	

Source: processed primary data, 2024

Based on the data in table 9, the cash costs incurred in one production lot with a raw material volume of 5880 kg are Rp. 246,200,- and the calculated costs are Rp. 2,394,000,- so that the total compost production cost for one production lot is Rp. 2,640,200,-.

Production Costs of Cattle Breeding Business

In Table 6, we can see the total costs incurred by the Manik Amerta farmer/livestock group in their cattle breeding cultivation business.

Table 6. Production costs of cattle breeding cultivation business at Manik Amerta Farmer Group in 2021

No.	Uraian	Volume	Harga Satuan	Biaya tunai (Rp.)	Biaya diperhitungkan (Rp.)	Total Biaya	Keterangan
1	Pencarian pakan hijauan (HOK /bulan)	3.75	65000		243,750	243,750	
2	Perawatan ternak dan kandang (HOK/bulan)	3.75	65000		243,750	243,750	
3	Vaksin	1	8,333	8,333		8,333	(Rp. 50.000 /6 bulan)
4	AUTS/K	1	3,333	3,333		3,333	(Rp. 40.000 /tahun)
5	Sewa Lahan	1	166,667	166,667		166,667	(Rp. 10.000.000 /5 tahun)
	Total Biaya			11,667	487,500	499,167	

Source: processed primary data, 2024

Based on the data in table 6, the cash costs incurred in one month of the cultivation period of 1 head of cattle are Rp. 11,667,- / month and the calculated costs are Rp. 487,500,- / month so that the total cost of cattle cultivation in 1 month is Rp. 499,167,-

4.6 Total Cost of Business Activities in the GroupAmerta Beads

The total production costs incurred by the Manik Amerta livestock farmer group, in 2 types of business activities carried out, namely cattle breeding and composting, are; the calculated costs are Rp. 12,144,000,-/month, while the cash costs are Rp. 719,533.-/month as shown in the following table 7:

Table 7. Total costs of production business activities at the Manik Amerta Farmer Group in 2021

No.	Uraian	Volume	Harga Satuan	Biaya tunai	Biaya diperhitungkan	Total Biaya	Keterangan
1	Bahan baku pengolahan kompos						
	a Dekomposer Beka (lt)	1	65,000	65,000		65,000	
	b Kantong plastik / kemasan (lbr)	156	1,000	156,000		156,000	
	c Benang jahit (paket)	1	10,000	10,000		10,000	
	d Bahan bakar / bensin (lt)	2	7,600	15,200		15,200	
	e Bahan baku kotoran ternak (2 mgg)	5,880	50		294,000	294,000	kg/proses olah
2	Biaya tenaga kerja (asumsi volume BO yg di olah)						
	a Pencampuran bahan organik + starter kompos (tinggi tumpukan maks 1 m)	20	35,000		700,000	700,000	
	b Pembalikan (mgg 3)	10	35,000		350,000	350,000	1/2 tim lainnya buat lot baru
	c Memindahkan bahan organik dari bak pendinginan (mgg 5)	10	35,000		350,000	350,000	1/2 tim lainnya pembalikan lot baru
	d Pengayakan dan pengemasan (mgg 6)	20	35,000		700,000	700,000	
3	Biaya tenaga kerja budidaya ternak						
	a Pencarian pakan hijauan (HOK/bulan)	75.00	65000		4,875,000	4,875,000	
	b Perawatan ternak dan kandang (HOK/bulan)	75.00	65000		4,875,000	4,875,000	
	c Vaksin	20	8,333	166,667		166,667	(Rp. 50.000 /6 bulan)
	d AUTS/K	42	3,333	140,000		140,000	(Rp. 40.000 /tahun)
	e Sewa Lahan	1	166,667	166,667		166,667	(Rp. 10.000.000 /5 tahun)
	Total Biaya			719,533	12,144,000	12,863,533	

Source: processed primary data, 2024

The total cost of both types of businesses carried out by the Manik Amerta livestock farmer group is Rp.12,863,533,-/month. This total cost comes from the sum of cash costs and calculated costs from each business carried out by the Manik Amerta livestock farmer group. This is in accordance with the opinion of Sukotjo and Swastha (1993) who stated that total costs are all costs that will be incurred by the company or in other words, this total cost is the sum of cash costs and calculated costs.

4.7 Income and Feasibility of Manik Amerta Farmer/Livestock Group Farming Business

Income is the difference between total revenue and total costs incurred in one production cycle. The amount of income obtained. This is in accordance with Rasyaf's opinion (1996) that farmer or rancher income is the difference between revenue and all costs incurred during their business activities. If revenue is reduced by production costs, the result is called income.

The amount of farm income obtained by the Manik Amerta livestock farmer group depends on the scale of production and the costs incurred. The amount of income obtained by the Manik Amerta livestock farmer/group can be seen in Table 8.

Table 8. Production income from the Manik Amerta Farmer Group in 2021

No.	Uraian	Volume	Harga Satuan	Biaya tunai	Biaya diperhitungkan	Total Biaya	Keterangan
A	BIAYA PRODUKSI						
1	Bahan baku pengolahan kompos						
	a Dekomposer Beka (lt)	1	65,000	65,000		65,000	
	b Kantong plastik / kemasan (lbr)	156	1,000	156,000		156,000	
	c Benang jahit (paket)	1	10,000	10,000		10,000	
	d Bahan bakar / bensin (lt)	2	7,600	15,200		15,200	
	e Bahan baku kotoran ternak (2 mgg)	5,880	50		294,000	294,000	kg/proses olah
2	Biaya tenaga kerja Pengolahan Kompos (asumsi volume BO yg di olah)						
	a Pencampuran bahan organik + starter kompos (tinggi tumpukan maks 1 m)	20	35,000		700,000	700,000	
	b Pembalikan (mgg 3)	10	35,000		350,000	350,000	1/2 tim lainnya buat lot baru
	c Memindahkan bahan organik dari bak pendinginan (mgg 5)	10	35,000		350,000	350,000	1/2 tim lainnya pembalikan lot baru
	d Pengayakan dan pengemasan (mgg 6)	20	35,000		700,000	700,000	
3	Biaya tenaga kerja budidaya ternak						
	a Pencarian pakan hijauan (HOK /bulan)	75.00	65000		4,875,000	4,875,000	
	b Perawatan ternak dan kandang (HOK/bulan)	75.00	65000		4,875,000	4,875,000	
	c Vaksin	20	8,333	166,667		166,667	{ Rp. 50.000 /6 bulan }
	d AUTS/K	42	3,333	140,000		140,000	{ Rp. 40.000 /tahun }
	e Kontribusi ke kelompok			320,833		320,833	{ Rp. 10.000.000 /5 tahun }
	f Sewa Lahan	1	166,667	166,667		166,667	{ Rp. 10.000.000 /5 tahun }
	TOTAL BIAYA PRODUKSI			1,040,366	12,144,000	13,184,366	
B	PENERIMAAN USAHA TANI						
1	Penerimaan Tambahan Anggota						
	a Penjualan bahan mentah	5,600	50		280,000	280,000	
	b Tenaga kerja pengolahan kompos	60	35,000		2,100,000	2,100,000	
	Jumlah				2,380,000	2,380,000	
2	Penerimaan Hasil Produksi						
	a Penerimaan Hasil pengolahan kompos			2,548,000	2,548,000	2,548,000	46584 kg /10 bulan
	b Penerimaan Hasil penjualan bibit ternak			3,091,667	3,091,667	3,091,667	44 ekor / 5 tahun
	Jumlah			5,639,667	5,639,667	5,639,667	
	TOTAL PENERIMAAN			5,639,667	8,019,667	8,019,667	
C	PENDAPATAN USAHA TANI						
	a Pendapatan Hasil pengolahan kompos			2,301,800	154,000	-92,200	
	b Pendapatan Hasil budidaya ternak			2,297,501	5,639,667	5,473,000	
	Jumlah			4,599,301	-4,124,333	-5,164,699	
D	RASIO R/C			5.42	0.66	0.61	
	a Rasio kegiatan pengolahan kompos			10.35	1.06	0.97	
	b Rasio kegiatan budidaya ternak			3.89	0.32	0.29	
	Jumlah			5.42	0.66	0.61	

Of the two types of businesses carried out, the largest income is obtained from the composting business with a large income of Rp. 2,301,800,-/month, with details of income of Rp. 2,548,000.-/month minus production costs of Rp. 246,200,-/month. Business feasibility R/C = 10.35. While the cattle breeding business obtained an average income of Rp. 2,297,501.-/month. with details of income obtained of Rp. 3,091,667.-/month minus production costs of Rp. 794,166.-/month. Feasibility of farming business R/C = 3.87 The involvement of group members in mutual cooperation activities in livestock farming and compost processing activities in the Manik Amerta Farmer Group turned out to be less effective and inefficient because it resulted in high operational cost calculations and was not productive as seen in the results of the ratio analysis (R/C) of 0.61 (<1; not feasible). However, because the livestock activities they do as a side business make the calculation of this business analysis very positive in increasing the income of group members.

5. CONCLUSION

Based on the results of the analysis and discussion, the following conclusions can be drawn:

1. The income obtained by the Manik Amerta farmer/livestock group in the SIMANTRI activity is obtained from 2 activities, namely compost processing business and cattle breeding business. The income from the cattle breeding

business is Rp. 2,297,501.- per month and the organic fertilizer business is Rp. 2,301,800,- per month.

2. Feasibility of farming business $R/C = 5.42$ (very feasible): obtained through optimization of local resources through the concept of Low external input sustainable agriculture (LEISA), where the output of a livestock farming activity is input for compost processing activities.

REFERENCE

Abidin. 2002. Penggemukan Sapi Potong. Agromedia Pustaka. Jakarta.

Ali, H. M., M. Yusuf, J.A. Syamsu. 2011. Prospek Pengembangan Peternakan Berkelanjutan Melalui Sistem Integrasi Tanaman-Ternak Model Zero Waste Di Sulawesi Selatan.

Rasyaf, M. 1996. Memasarkan Hasil Peternakan. Penebar Swadaya. Jakarta.

Soekartawi. 2003. Agribisnis Teori dan Aplikasinya. PT. Raja Grafindo Persada. Jakarta.

Sukirno. 1994. Pengantar Teori Ekonomi Makro. Penerbit Raja Grafindo. Jakarta.