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Assessing farmers' cost-benefit of rice cultivation in IADA Kota Belud and Batang Lupar

(Menilai kos-faedah petani dalam penanaman padi di IADA Kota Belud dan Batang Lupar)

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Keywords: cost-benefit analysis, rice cultivation, rice farmers

Abstract

Integrated Agricultural Development Authority (IADA) Kota Belud in Sabah and Batang Lupar in Sarawak are considered as young granaries which have been gazetted by the government. As new granaries, farmers were expected to face challenges in ensuring the rice cultivation sustainability. This study aimed to assess the cost and benefits gained by farmers in understanding whether the rice cultivation could be maintained and to give positive impact on farmers' livelihood. The primary data was collected from 120 farmers in two areas. IADA Kota Belud had 58 responses while IADA Batang Lupar had 62 responses. Average rice yield at IADA Kota Belud was 2.9 mt/ha with an average subsidised production cost at RM1,665.31/ha and RM2,856.91/ha without subsidies. The farmer's net income was RM1,246.48/ha with subsidies and RM64.88/ha without subsidies. This showed a relatively large gap of income between subsidised and unsubsidised rice production/ha. Meanwhile, at IADA Batang Lupar, there were two scenarios in weighing the return of the farmer's income through different average selling prices/kg of rice. For both scenarios, the estimated cost of production was RM1,163.59/ha with subsidies and RM2,345.19/ha without subsidies. Though the average production was low at 1.47 mt/ha compared to IADA Kota Belud, the selling price was RM4.20/kg. Therefore, farmer's gross income was RM6,174/ha if they decided to sell all of the harvests to the local niche market for the traditional rice varieties that have been widely used in Batang Lupar.

Introduction

The 11th Malaysian Plan (RMK-11) was focused on ensuring food supply, increasing productivity, improving farmers' skills as well as improving support and delivery services (Omar et al. 2019). The increase in demand for rice was due to the growing population and multiple interrelated factors. On the other hand, the increase in rice production in Malaysia were closely related to technical efficiency and productivity as well as technological advances (Rahim et al. 2021). Various incentives and subsidies

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have been allocated by the government for rice farmers to increase the productivity and thus increase their income of farmers (Athurokala et al. 2009; Ramli et al. 2012; Ariff et al. 2019).

To be more specific, quite significant input funds and price subsidies for the rice industry/ha have been allocated by the government (Dano and Samonte 2005; Vengedasalam et al. 2011; Ramli et al. 2012; Rahim et al. 2017), and these subsidies help farmers in reducing the production costs even though it was inelastic (Tey et al. 2010). Various incentives and subsidies have been provided by the government for farmers to increase productivity and income of farmers. Government's subsidies towards the rice industry covered a total of RM1,525.80/farmer/ha. Providing these input subsidies undeniably helped many in reducing production costs (Rajamoorthy and Munusamy 2015).

The average cost spent by government excluding the *Baja Bio* (Bio Fertiliser), price subsidy and Ground Magnesium Lime (GML) is RM1,535.80/ha. Other than *Insentif Benih Padi Sah* (IPBS) which is directly subsidised through seed producers, the other three schemes are *Skim Insentif Pengeluaran Padi* (SIPP) which consists of plowing labour wage, *Natrium Phosphorus Kalium* (NPK) additional fertiliser and pesticide. In addition, RM621.60/ha is allocated under the *Skim Baja Padi Kerajaan Persekutuan* (SBPKP) while *Skim Subsidi Baja dan Racun Padi Bukit* (SBRPB) is specifically allocated for hill rice cultivation. In general, almost one third of the cultivation costs of rice/ha is subsidised by government for the farmers (MAFI 2019) (*Table 1*).

The national and global food security vision as well as the farmer's livelihood were the main unsettled debates, seriously discussed among stakeholders from time to time. As government set to achieve at least 75% of self sufficiency level (SSL) on rice by 2025 in 12th Malaysian Plan (RMK-12), few efforts have been taken. New specific areas of rice cultivation have been established, hoping that these measures should contribute to the improvement of SSL of rice. Approximately, the area of rice cultivation in Malaysia in 2019 is 681,559 ha. There were 12 main rice cultivation areas or rice granaries covering 62% of the total rice cultivated area which equal to 425,613 ha (MOA 2019). The granary area was divided into the northern, western and eastern zones. In this study, the focus will be on two granaries located in East Malaysia (Borneo), the Integrated Agricultural Development Authority (IADA) of Kota Belud and Batang Lupar.

Both areas were newly gazetted granaries as additional to the existing granaries. Both granaries were known to be the new rice bowl of the country as these granaries were expected to contribute to the food security of the country (Ali 2017; Tahir and Abd Talip 2020). The area of rice cultivation in IADA Kota Belud has slightly increase from 2017 to 2019 (9,083 to 9,672 ha). As for Batang Lupar, a total of rice planted area recorded in 2019 was 1,116 ha (*Figures 1a & 1b*).

The production of rice in 2019 from the country's main granaries was 2.18 million mt with the average yield at 5.1 mt/ha. This amount represents 62% of the total rice production of 3,513,235 tonnes nationwide (Omar et al. 2019). The average rice yield for the past five years increased by 5.4% from 4.8 mt in 2015 to 5.1 mt/ha in 2019 (MOA 2019). Rice production in IADA Kota Belud in 2018 was the highest at 30,096 mt as compared to 2017 (22,805 mt) and 2019 (25,571 mt). The year 2017 showed the lowest rice production of 22,805 mt. For the same period, rice production at IADA Batang Lupar did not show any noticeable changes (MAFI 2019). As planted area were relatively the same, it was expected that the average production of rice for those three consecutive years would remain and not much different.

As can be seen in *Table 2*, the average rice production at IADA Kota Belud in

Table 1. Allocated subsidy schemes from government to rice farmers

Government's cost	Peninsular (Paddy field)	Sabah		Sarawak	
		Paddy field	Hill paddy	Paddy field	Hill paddy
i) *Insentif Benih Padi Sah (IBPS)*	144.20	-	-	-	-
ii) *Skim Insentif Pengeluaran Padi (SIPP)*					
a) Ploughing wages	100.00	100.00	-	100.00	-
b) Agricultural input (Bio-fertiliser and local beneficial microbes)	140.00	140.00	-	140.00	-
c) Additional NPK fertilisers	360.00	360.00	-	360.00	
d) Pesticides	200.00	200.00	-	200.00	-
e) Lime- RM970 once in 3 years	970.00	970.00	-	970.00	-
iii) *Skim Baja Padi Kerajaan Persekutuan (SBPKP)*	621.60	621.60	-	621.60	-
iv) *Skim Subsidi Baja dan Rajun Padi Bukit (SBRPB)*					
a) Compound fertilisers	-	-	496.72	-	496.72
b) Liquid urea	-	-	224.50	-	224.50
c) Ammonium glufosinate	-	-	229.60	-	229.60
Total Government's cost	2,535.80	2,391.60	950.82	2,391.60	950.82
Total overall paddy cost/ha	4,217.23	4,874.10	4,699.82	4,874.10	4,941.72

Source: Department of Agriculture (2019) and *Bahagian Industri Padi dan Beras* (IPB) (2019)

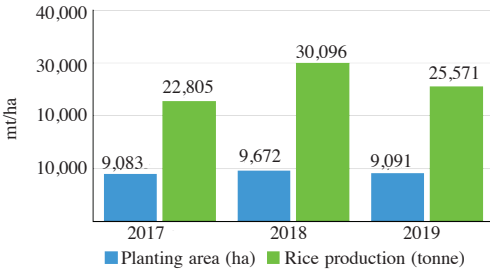

Figure 1a. Planted area and rice production of IADA Kota Belud, 2017 – 2019

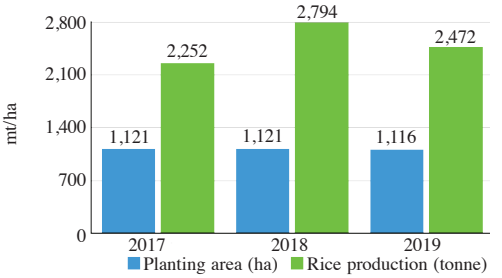

Figure 1b. Planted area and rice production of IADA Batang Lupar, 2017 – 2019

Table 2. Average rice yield in IADA Kota Belud and Batang Lupar, 2017 – 2019

Granary (IADA)	Average yield (mt/ha)		
	2017	2018	2019
Kota Belud	2,511	3,112	2,813
Batang Lupar	2,009	2,492	2,215

Source: Ministry of Agriculture and Food Industries (2019)

2017 was 2,511 mt/ha and has increased in 2018 to 3,112 mt/ha. However, there was a decrease of 9.6% in the following year (2019) to 2,813 mt/ha. It showed a similar trend in IADA Batang Lupar which stated an average yield of 2,009 in 2017 and increased to 2,492 mt/ha in 2018. However, the average yield was then decreased in 2019 to 2,215 mt/ha. Even though Batang Lupar and Kota Belud production's performance were way low below national average of 4.0 mt/ha, there was IADA Pekan that averagely performed the same if not better while being in the peninsular area of Malaysia. Despite disparities of technological adoption existed in Borneo's granaries, both scored averagely fine in their production (Omar et al. 2019), showing potential to increase the yield performances in the future years.

The assessment of the use of input in rice production and the correlation between the use of water, soil and labour resources in the rice crop sector was to explore the effectiveness of the use of subsidy inputs by farmers in the rice fields as well as the impact of subsidies in increasing rice yields and farmers' income. The objective of this study was to make an economic assessment of rice cultivation in IADA Kota Belud in Sabah and IADA Batang Lupar in Sarawak.

Methodology

The study was carried out with the collection of primary data from 120 farmers in two areas, namely IADA Kota Belud (58 responses) and IADA Batang Lupar (62 responses). Respondents were selected using a convenience sampling method according to the area of the granary, region and zone. The selection of respondents should be based on high, medium and low yield categories as well as farmers who fully used the service providers in their rice planting activity and farmers who worked by themselves with partially used service providers. However the responsibilities of the selected respondents were being handed over to the local authority of IADA Kota Belud and Batang Lupar to decide. This is because every granary performances are different among each other and the performance of their farmers were being recorded by the local authority.

A focus group discussion session was held in each selected field to identify the parameters that should meet the requirements of the study in developing the questionnaire. Focus group participants consist of farmers, service providers and extension officers. The information and data collected were planting dates, soil types, rice varieties and rice cultivation practices in each selected area. The information and data collected through the questionnaire were the

respondent's profile, the characteristics of the rice fields, practice of rice cultivation, technologies used, the cost of production and the yield. Before surveying the field, a pilot study was conducted to test the questionnaires that had been developed. The survey was carried out by the appointed enumerators (extension officers from IADA) by area for the two planting seasons of 2019 and 2020.

The cultivation of rice in Batang Lupar was slightly different from other rice granaries where most farmers only grow rice for one planting season/year. In addition to primary data collection, secondary data (e.g. yield performance recorded, list of farmers and extension services schedule for data collection synchronisation) were collected through statistics and records from various government agencies and journal publications. The data was analysed using descriptive analyses to get the general picture of the respondents and the farm profiles. The socio-demographic characteristics were analysed using a chi-square test to investigate the association between the variables and study sites. A cost-benefit analysis was also carried out to assess the viability level of each area while at the same time comparing the production costs, benefits, yield performance and scenarios between the granaries.

The Cost-Benefit Analysis (CBA) method was also used to look at the viability of the project over a period of time such as five or ten years (Ariff et al. 2011). The production cost data consists of fixed and variable costs (operating costs). Fixed costs are development costs or capital costs that do not change with the production value. For example, the cost of irrigation infrastructures, storage and machinery. Variable cost change refers to the direct cost involved in the production of rice or paddy production and varies according to the level of production. Among these costs is the cost of seeds, pesticides for the control of diseases and insects, fertiliser and fees of workers. Based on these cash flow statements, the calculations for financial analysis, such as production cost, benefit-cost ratio (BCR), profitability and net income of farmers were carried out (*Table 3*).

Table 3. Parameter description in production viability analysis

Benefit cost analysis	Description
Gross income	Yield x price
Net income	Gross income – total production cost
Total production cost	Variable cost + fixed cost + other costs
Benefit cost ratio (BCR)	Obtained by dividing the total income during the project by the total expenditure. BCR value shows the rate of return per MYR invested. If the value of BCR exceeds 1, then the project will benefit.

Source: Rahim et al. (2021)

Results and discussions

The data analysis was carried out on 120 respondents in the IADA area of Kota Belud (58 farmers) and IADA Batang Lupar (62 farmers). As can be seen in *Table 4*, 31% of respondents from Kota Belud were on the age scale of 41 – 50 years and 51 – 60, respectively. These two categories also dominated the percentage of respondents representing IADA Batang Lupar which is 27.1% (41 – 50 years) and 30.5% (51 – 60 years). For the respondents in IADA Kota Belud, 13.8% were female farmers and 98.3% were Bumiputra Sabah and Sarawak while at IADA Batang Lupar, 30.2% were female farmers with 82.3% being Bumiputra Sabah and Sarawak. The majority of the respondents from IADA Kota Belud

Table 4. Demographic profile of respondents in IADA Kota Belud and Batang Lupar, 2020

Profile/Granary	IADA Kota Belud		IADA Batang Lupar		Chi-square	
	Freq.	%	Freq.	%	χ^2	P-value
Age						
31 – 40 years old	7	12.1	6	10.2	4.78	0.883
41 – 50 years old	18	31.0	16	27.1		
51 – 60 years old	18	31.0	18	30.5		
≥ 61 years old	15	25.9	19	32.2		
Gender						
Male	50	86.2	44	69.8	1.22	-
Female	8	13.8	19	30.2		
Race						
Malay	1	1.7	11	17.7	3.70	-
Bumiputra Sabah and Sarawak	57	98.3	51	82.3		
Education level						
Primary	16	27.6	26	41.9	2.38	0.103
Lower secondary	23	39.7	12	19.4		
Higher secondary	13	22.4	16	25.8		
Others	6	10.3	8	12.9		
Household (member)						
≤3 persons	8	13.8	13	21.0	2.17	0.126
4 – 6 persons	27	46.6	36	58.1		
7 – 9 persons	19	32.8	12	19.4		
≥10 persons	4	6.9	1	1.6		
Household (dependent)						
≤3 persons	31	53.4	43	69.4	1.44	0.202
4 – 6 persons	24	41.4	16	25.8		
7 – 9 persons	2	3.4	3	4.8		
≥10 persons	1	1.7	0	0.0		
Full time job						
Rice farmer	57	98.3	59	95.2	1.07	0.386
Farmer (non-rice)	0	0.0	2	3.2		
Business	0	0.0	0	0.0		
Public sector	1	1.7	1	1.6		
Private sector	0	0.0	0	0.0		
Others	0	0.0	0	0.0		
Part-time job						
Rice farmer	28	48.3	8	12.9	3.34	0.001*
Farmer (non-rice)	14	24.1	27	43.5		
Business	4	6.9	3	4.8		
Public sector	0	0.0	2	3.2		
Private sector	0	0.0	0	0.0		
Others	12	20.7	22	35.5		

Note: *Statistically significant at P <0.01.

completed their studies at the SRP/PMR lower secondary level (39.7%) while a large number of farmers in IADA Batang Lupar only completed their education at the primary school level (41.9%).

Majority of farmers in IADA Kota Belud (46.6%) and IADA Batang Lupar (58.1%) has 4 – 6 family members. Farmers with dependents less than 3 people from IADA Kota Belud is 53.4% and IADA Batang Lupar is 69.4%. The majority of the respondents were also full-time rice growers (IADA Kota Belud with 98.3% and IADA Batang Lupar with 95.2%). Most of them are committed to part-time jobs such as farming (non-rice), doing businesses and working in the public sector. On average, more than 3 family members are involved in rice cultivation activity for both areas, IADA Kota Belud (88%) and Batang Lupar (94%) as shown in *Figure 2*.

The majority of respondents (IADA Kota Belud with 44.8% and IADA Batang Lupar with 54.2.2%) have more than 30 years of experience in rice cultivation. However, there were some farmers with less than 10 years of experience (IADA Kota Belud 20.7% and IADA Batang Lupar 18.6%), while those with more than 30 years of experience were 34.5% in IADA Kota Belud and 27.1% in IADA Batang Lupar. The involvement of family members in rice cultivation showed that the majority of respondents (IADA Kota Belud is 87.7% and IADA Batang Lupar is 93.5%) used family labour with less than the number of people/farmer (*Figure 3*).

As seen in *Table 5*, it was found that farmers in IADA Kota Belud on average work on the rice field with an area ranging from 1 – 2 ha (36.2%) while farmers in IADA Batang Lupar were working on the area of less than 1 ha (54%). The study also found that the majority of farmers in IADA Kota Belud (36.2%) obtained rice yields ranging from 2 – 3 mt/ha and 3 – 4 mt/ha. However, some farmers in IADA Kota Belud produced more than 4 mt/ha (10.3%). However, in IADA Batang Lupar most

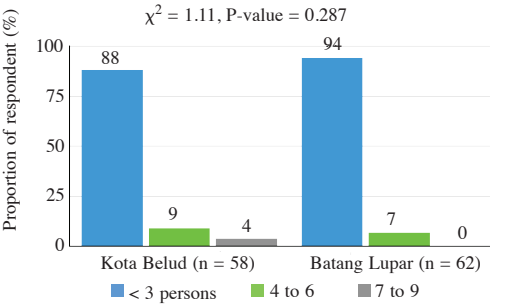

Figure 2. Family members involved in rice cultivation activity in 2020

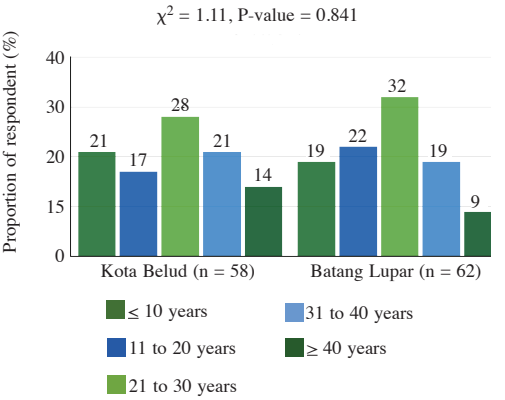

Figure 3. Experience in rice cultivation among IADA Kota Belud and Batang Lupar farmers in 2020

farmers obtained an average yield of 1 mt/ha (61.9%), 22.2% get a rice yield of between 1 – 2 mt/ha while 14.3% obtained a yield of between 2 to 3 mt/ha. There were only a small number (1.6%) of farmers in Batang Lupar who were able to get a rice yield of more than 4 mt/ha.

Is it still worth to cultivate rice in Kota Belud and Batang Lupar

The analysis of the cost of production and the return of the farmers takes into account the subsidies provided by the government and the analysis of the cost of production was estimated the monetary returns for the IADA Kota Belud and IADA Batang Lupar farmers. The findings showed that the average rice yield in the area of IADA Kota Belud in two seasons was measured at 2.9 mt/ha. The average production cost

Table 5. Current area and yield performance of IADA Kota Belud and IADA Batang Lupar in 2020

Profile/Granary		IADA Kota Belud (%) n = 58	IADA Batang Lupar (%) n = 62	Chi-square	
				χ^2	P-value
Area	< 1 ha	31.0	54.0	1.42	0.003**
	1 – 2 ha	36.2	46.0		
	2 – 3 ha	22.4	0		
	3 – 4 ha	10.3	0		
	> 4 ha	0	0		
Yield	< 1000 kg/ha	1.7	61.9	1.94	0.002**
	1000 – 2000 kg/ha	15.5	22.2		
	2000 – 3000 kg/ha	36.2	14.3		
	3000 – 4000 kg/ha	36.2	0		
	> 4000 kg/ha	10.3	1.6		

*Statistically significant at P <0.01.

of owners with subsidies and without subsidies was RM1,665.31 and RM2,856.91/ha respectively. The gross income of the farmers in the granary was RM2,911.79/ha after the completion which on average was 14%. The farmer's net income was RM1,246.48/ha (with subsidies) and RM64.88/ha (without subsidies). The value of the benefit cost ratio, (BCR) was 1.75 with subsidies and 1.02 without subsidies. As expected there was a difference in net income with a relatively large gap between subsidised and unsubsidised rice production/ha in IADA Kota Belud. Undeniably, government allocation through subsidies put a more promising return and alleviating the livelihood of the farmers.

Meanwhile, at IADA Batang Lupar, there were two scenarios in weighing the return of the farmer's income based on cost. The study found that the rice cultivation culture among Batang Lupar farmers was unique with most of them growing traditional rice varieties with different average selling prices per kilogram as compared to other granaries. For both scenarios, the estimated production cost was the same at RM1,163.59/ha (with subsidy) and RM2,345.19/ha (without subsidy). The first scenario in Batang Lupar[a] shows that the entire rice yield harvested is sold without using it by themselves. With an average yield of 1.47 mt/ha and a selling price of RM4.20/kg, the farmer's gross income was RM6,174/ha. As for the Batang Lupar[b] scenario, if part (50%) of the rice produced is used by farmers themselves while the remaining part is sold. The estimated gross income of the farmers is RM3,087/ha (*Table 6*).

The net income of farmers for the Batang Lupar[a] scenario is RM5,010.41/ha with subsidy while without subsidy, farmers will get RM3,828.81/ha. The BCR performance values for Batang Lupar[a] are 5.31 (with subsidy) and 2.63 (without subsidy), respectively. Similarly, with the Batang Lupar[b] scenario, the farmer's net income is RM1,923.41/ha (with subsidy) and RM741.81/ha (without subsidy) with BCR worth 2.65 and 1.32 respectively. Although part of the 50% of the yield is not sold and for self-consumption, it is found that the net income earned is still quite high/ha cultivated since the cost of production was relatively low for the farmers.

The farmers' net income for the Batang Lupar[a] and Batang Lupar[b] scenarios were acceptable although the yield performances were significant and high as compared to other granaries especially from peninsular. The average selling price/kg for traditional

Table 6. Production costs and benefits of rice cultivation in Kota Belud and Batang Lupar

ITEM		Granary		
		IADA Kota Belud	IADA Batang Lupar[a]	IADA Batang Lupar[b]
Average area (ha)		1.95	0.94	0.94
Average yield (mt/ha)		2.97	1.47	0.74
Deduction (quality) (%)		14	0	0
Average price/kg		1.14	4.20	4.20
Gross income (RM/ha)		2,911.79	6,174.00	3,087.00
Cost of production	With subsidy[1]	1,665.31	1,163.59	1,163.59
(RM/ha)	Without subsidy[2]	2,846.91	2,345.19	2,345.19
Net income	With subsidy[1]	1,246.48	5,010.41	1,923.41
(RM/ha)	Without subsidy[2]	64.88	3,828.81	741.81
BCR	With subsidy[1]	1.75	5.31	2.65
	Without subsidy[2]	1.02	2.63	1.32

Scenario: [a] = Whole yield sold [b] = 50% yield sold and 50% self-used, as stated by majority of respondents in Batang Lupar
Subsidy provision: [1] = input subsidies provided; [2] = input subsidies not provided

rice sold was much higher than the price of inbred modern rice varieties which which were mainly grown throughout the granaries in peninsular of Malaysia. The minimum price for mix traditional rice varieties planted was as much as RM4.00 and could go much higher up to RM7/kg. The dependability of Batang Lupar farmers on subsidies is less as compared to the Kota Belud since traditional practices were still widely used. Despite inherited hereditary cultivation approaches and traditional varieties were still deeply rooted among Batang Lupar farmers except for few, the net income earned if both sold and consumed were valued monetarily was at least comparable to other granaries.

Conclusion

Although the total rice production per hectare (yield performance) in the area of IADA Kota Belud and Batang Lupar was not comparable to the other major granary areas of the country, the net income of the farmers shows a level that was still positive due to the relatively low cost of production/ha for both granaries due to different reasons. Batang Lupar farmers' specifically still widely used the traditional varieties while in Kota Belud, there were using inbred rice varieties. Furthermore in particular, the cultivation of rice in Batang Lupar showed a higher average selling price due to the traditional rice variety values grown by the farmers. This scenario explains why the majority of the farmers in IADA Batang Lupar still carry out traditional cultivation practices yet afford to profit monetarily. The majority of farmers in both granaries were from those aged 40 years and above. However, in IADA Kota Belud, a few farmers have started to implement at least semi-mechanisation in rice production at Batang Lupar, farmers are still not exposed to the practice/technology of semi-mechanical rice production.

With this in mind, several important dimensions needs to be carefully considered if the rice production technology is to be introduced especially at IADA Batang Lupar. This is because the rice cultivation culture there is unique and different (traditional varieties, traditional rice cultivation practices, etc.) and this requires a policy decision that should be considered in various aspects; economically and sociologically. The value of traditional varieties at the moment indicates a stable and higher price compared to other modern rice varieties used in most granaries. The supply of traditional rice produced at IADA Batang Lupar if increased uncontrollably

will lead to a fall in the price of the rice in the market. Limited production produces a 'niche market' product that was able to maintain the price of Sarawak traditional rice in the local market for all these years. With this, it is necessary to maintain the cultivation of traditional rice in the selected area.

The application of semi-modern or modern technology if to be brought in should not eliminate the skills and knowledge of cultivation or production of traditional varieties that have been inherited by the farming community in Batang Lupar throughout decades. However, modernized areas should be considered to bring young people to attract them to venture and continue cultivate rice in their hometown with better technological usage. Access to public transport and roads in Batang Lupar should be fully developed to facilitate some phases in rice cultivation such as the delivery of rice planting inputs and very limited rice production sales options to the local community. Price factors for both common white rice and the traditional one should be critically considered for the policy development in IADA Batang Lupar area for both varieties to continuously strive.

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Abstrak

Kawasan Pembangunan Pertanian Bersepadu (IADA) Kota Belud di Sabah dan Batang Lupar di Sarawak dianggap sebagai jelapang muda yang telah diwartakan oleh kerajaan. Sebagai jelapang baharu, petani dijangka menghadapi cabaran dalam memastikan kelestarian penanaman padi. Kajian ini bertujuan untuk menilai kos dan faedah yang diperoleh oleh petani dalam memahami sama ada penanaman padi dapat dikekalkan dan memberi impak positif kepada kehidupan petani. Data primer dikumpul daripada 120 petani di dua kawasan. IADA Kota Belud mempunyai 58 respons manakala IADA Batang Lupar mempunyai 62 respons. Purata hasil padi di IADA Kota Belud ialah 2.9 mt/ha dengan purata kos pengeluaran bersubsidi pada RM1,665.31/ha dan RM2,856.91/ha tanpa subsidi. Pendapatan bersih petani ialah RM1,246.48/ha dengan subsidi dan RM64.88/ha tanpa subsidi. Hal ini menunjukkan jurang pendapatan yang agak besar antara pengeluaran/ha beras bersubsidi dan tidak bersubsidi. Sementara itu, di IADA Batang Lupar, terdapat dua senario dalam menimbang pulangan pendapatan petani melalui purata harga jualan/kg beras yang berbeza. Bagi kedua-dua senario, anggaran kos pengeluaran ialah RM1,163.59/ha dengan subsidi dan RM2,345.19/ha tanpa subsidi. Walaupun purata pengeluaran adalah rendah pada 1.47 mt/ha berbanding dengan IADA Kota Belud, harga jualan adalah RM4.20/kg. Oleh itu, pendapatan kasar petani ialah RM6,174/ha jika mereka memutuskan untuk menjual semua hasil tuaian ke pasaran khusus tempatan bagi varieti padi tradisional yang telah digunakan secara meluas di Batang Lupar.