

ANALYSIS OF OIL PALM SUSTAINABLE REPLANTING MODELS, A CASE AT PT. AGROWIYANA , TUNGGUL ULU, TANJUNG JABUNG BARAT, JAMBI

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ABSTRACT

The oil palm replanting program is becoming of importance for the next decade as some of oil palm plantations are reaching the productivity peak. This research was aimed to select the priority of oil palm replanting strategy with respect to the related factors and impacts to the share holders of PIR Trans and KPPA plantation of PT. AGROWIYANA , and to identify key success indicators of replanting model. A discriptive research methodoligy was carried out using Analytical Hierarchy Process (AHP) and Focus Group Discussion (FGD) involving multi stakeholders of PT. AGROWIYANA . Results of this research indicated that financial is considered as the most important factor for replanting implemition with the total cutting using standard technology as chosen replanting strategy. The funding scheme through intensive fund rising IDAPERTABUN needs to be well prepared to involve more farmer groups.

Keywords: PT. AGROWIYANA , Replanting Strategy

ABSTRAK

Dalam dekade ke depan Program penanaman kembali kebun kelapa sawit menjadi sangat penting akibat telah mecapai produksi puncak. Penelitian ini bertujuan untuk meneapkan prioritas strategi penanaman kembali berdasarkan factor dan dampaknya kepada pemangku kepentingan pada perkebunan PIR Trans dan KPPA di PT. AGROWIYANA dan mengidentifikasi indikator kunci keberhasilan dalam model penanaman kembali. Metodologi penelitian deskriptif digunakan melalui Analytical Hierarchy Process (AHP) dan Focus Group Discussion (FGD) melibatkan berbagai pemangku kepentingan dari PT. AGROWIYANA. Hasil penelitian ini mengindikasikan bahwa masalah yang paling penting adalah faktor keuangan berdasarkan pemilihan teknik penanaman kembali yang diimplementasikan dengan menebang habis tanaman atas dasar teknologi standar. Skema pembiayaan melalui dana intensif IDAPERTABUN membutuhkan persiapan yang baik yang akan melibatkan banyak kelompok tani.

Kata Kunci: PT. AGROWIYANA , Replanting Strategy

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INTRODUCTION

Palm oil is the highest efficient producers of vegetable oil, requiring less land than any other oil-producing crop. One hectare of land planted with oil palm yields 3,6 tonnes of oil per year, whereas ten hectares of land is required to yield the same amount of vegetable oil. The efficiency of commercial vegetable crop can be measured from the balance of input energy compare to output energy, energy balance of palm oil is 163 gj/ha, soybean 30 gj/ha and rapeseed 47 gj/ha. This fact can explain why oil palm produces 22% of the world's vegetable oil on only 2% of the land planted oil palm compare to major vegetable oil crops. (Fairhurst and Mutert, 1999).

The global demand of vegetable oil and palm oil is about 44,2 million tons per year with an average growth of 2,1 million tons per year. The palm oil industry has grown significantly over the past few years on account of a growing population, it was projected in year 2015,

the world's population will be 7.1 Billion and palm oil consumption will be 60,0 million tones.

Indonesia is the highest palm oil producer in the world, around 45% of world's palm oil was supplied by Indonesia. However, Indonesia palm oil industry has to concern to the certification for sustainable palm oil and the replanting activity. The first stage of PIR-Trans (Nucleus-Plasm Partnership based Transmigration Program) planted oil palm trees in the period of 1980-1985 which have to be replanted in 2016 – 2020.

In Indonesia, smallholders oil palm plantation growing significantly and play an important role during year 2000 to 2010, the high growth (184%) compare to private plantation which was registered growth 62% and state own enterprise which only growing by 2% as shown in the Figure 1. It's mean the replanting program for smallholders plantation have to be a concern of all stake holders.

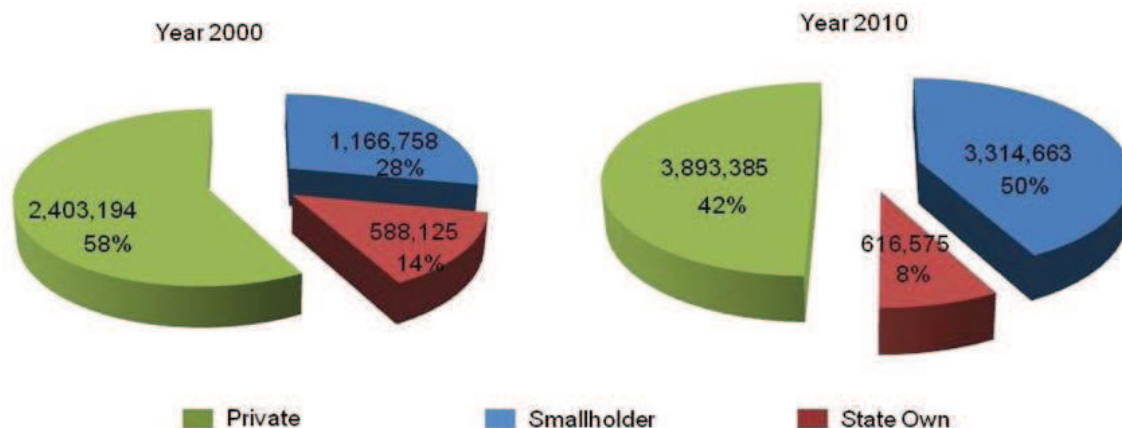


Figure 1. Growing of Oil Palm Area Plantation 2000-2010 (Data Processed from Ditjenbun, 2011)

This research was aimed to select the priority of oil palm replanting strategy with the respect to the related factors and impacts to the share holders of PIR Trans and KPPA plantation of PT. AGROWIYANA , and to identify key success indicators of replanting model.

METHODOLOGY

The research was carried out using discriptive approach with qualitative and quantitative data analysis in the following steps : (1) identification of factors, actors and alternatives of the replanting strategy, (2) priority strategy analysis using Analytical Hierachy Process (AHP), and (3) focus group discussion to formulate the implementation of the chosen replanting strategy.

Several actoors comprised of experts and practitioners who have the role in decision process for replanting in the plasma plantation of PT. AGROWIYANA in Jambi involved in this research: (1) smallholder plasma farmer who owned matured plantation, (2) chairmans of the ccooperatives which succeed encouraging smallholder farmers to settle bank loan, (3) managers of PT. AGROWIYANA , which has direct in touch to the plasma farmers (plasma management, community development management and plantation management), (4) experts of financing institution, (5) government officer, and (6) expert from local NGO.

RESULTS

PT. AGROWIYANA consistently developed nucleus-plasma partnership model since beginning, plasma plantation area was 65% of total plantation managed by PT. AGROWIYANA (7,700 ha), while nucleus plantation area only 35% (4.418 ha). 2 type of partnership have been developed by PT. AGROWIYANA , Perkebunan Inti Rakyat (PIR) Trans/Nucleus Estate Smallholder, which was specially designed for transmigrant and Kredit Koperasi Primer untuk Anggotanya (KKPA) / Prime Co-operative Credit for Members which was special designed for local community.

Smallholder farmers who have partnership with PT. AGROWIYANA are organized in the cooperatives and primary cooperatives as described in the Figure 2.

Smallholder plasma farmers aware on replanting issues, and the main concern to secure the replanting process are certified seed supply, adequate fertilizer availability, fund for replanting, bank loan fo living cost during unproductive period, fair and transparent of FFB price, production facilities, technical planting guidelines, replanting model and impacts, government support for PIR/NES contractual renewal.

The results of the stakeholder analysis is shown in Table 1. It indicated that financial factor is considered as the most important factor for replanting implementation.

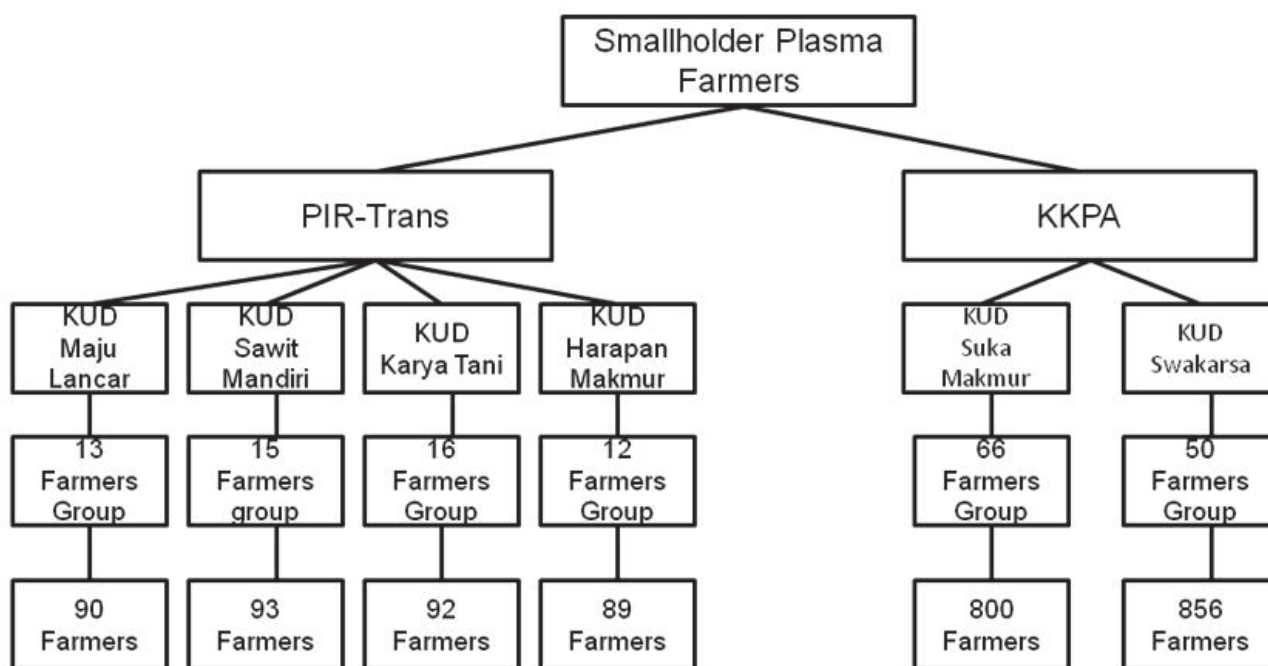


Figure 2. Smallholder Organization at Plasma Plantation PT. AGROWIYANA

Government initiated to rise funding through IDAPERTABUN/Fund Raising for Replanting Program (Iuran Dana Peremajaan Tanaman Perkebunan), this long term program in term of saving Rp. 40.000 – Rp. 70,000 per month during productive period until time for replanting, each farmer will get Rp. 8.000.000 per lot (2 Ha) for replanting fund. However, this program was not fully succeed due to not many farmer interested to participation and the fund for replanting was not sufficient to support farmer's live during non productive period.

The review on replanting strategy with respect to the report of RTI (2010) resulted in five replanting strategy,

namely : (1) Total cutting using standard technology, where matured oil palm in the one block cut totally and treat as new plantation area using standard plantation technology, (2) Total cutting with intercropping to support life cycle cost during non productive period. The 2nd crops e.g. corn and nut is planted to get short term income, (3) Gradual cutting intermittent among the row (Tebang bertahap berselang antar barisan). One row is replanted using total cutting standard technology while other row was retained to produce FFB until 2 years, (4) Gradual cutting per partial blocks, cutting 25% of plantation and continue every 2 years. Using this model, one block (2 Hectares) will finish replanting while 25% of 1st stage replanting start produces FFB

Table 1. Priority Level of Each Factors According to Key Actor Perspective

Actors	Technical	Institutional	Finacial	Socio-Culture
Government	0,650	0.119	0.674	0.144
Nucleus 1	0,037	0.319	0.468	0.175
Nucleus 2	0.080	0.267	0.548	0.106
NGO	0.082	0.149	0.547	0.109
Cooperative	0.143	0.075	0.660	0.052
Finance Intitution	0.085	0.240	0.730	0.152
Farmer	0.078	0.218	0.523	0.048
Combined	0.079	0.189	0.628	0.105

or after 4 years of 1st replanting, (5) Under planting, insertion new plant in the sideline of old plant. This replanting model required specific condition e.g. sufficient fertilizer, good pest and microbial control.

The comprehensive result of AHP analysis (Figure 2) showed that total cutting using standard technology was chosen as the best planting strategy. However, considering the importance of the financial factor for replanting implementation, the chosen planting strategy may shift to gradual cutting per partial blocks (Figure 3).

Key success indicators in implementing total cutting standard technology for replanting program of plasma plantation resulted from FGD are as follows:

1. Producing higher yield of FFB and extraction rate of CPO than other replanting model; total cutting will provide better fertilize, nutrition absorption and solar radiation distribution for photosynthetic process which will optimize growing of the plantation.
2. Cost efficient; in replanting process where land clearing, seed planting, fertilizing, and pest and disease controlling can be done massively in the cluster, it will reduce total cost. The conditions required to support this process are intensive involvement of nucleus as facilitator, smallholder plasma farmers as executor, and government as regulator.
3. More stable and better FFB price; total cutting using standard technology which complies with RSPO's principles and criteria will give guarantee of good absorption of CPO produced in the international market. It will affect on the price bargaining which usually 1% higher than non CSPO products.
4. Better in delivering the commitment; smallholder commitment to sell FFB only to PT. AGROWIYANA will be complied as long as it is supported by PT AGROWIYANA for replanting process in term of transparent partnership agreement, providing access with banking included the role of nucleus as the guarantor and other initiatives to improve replanting process.

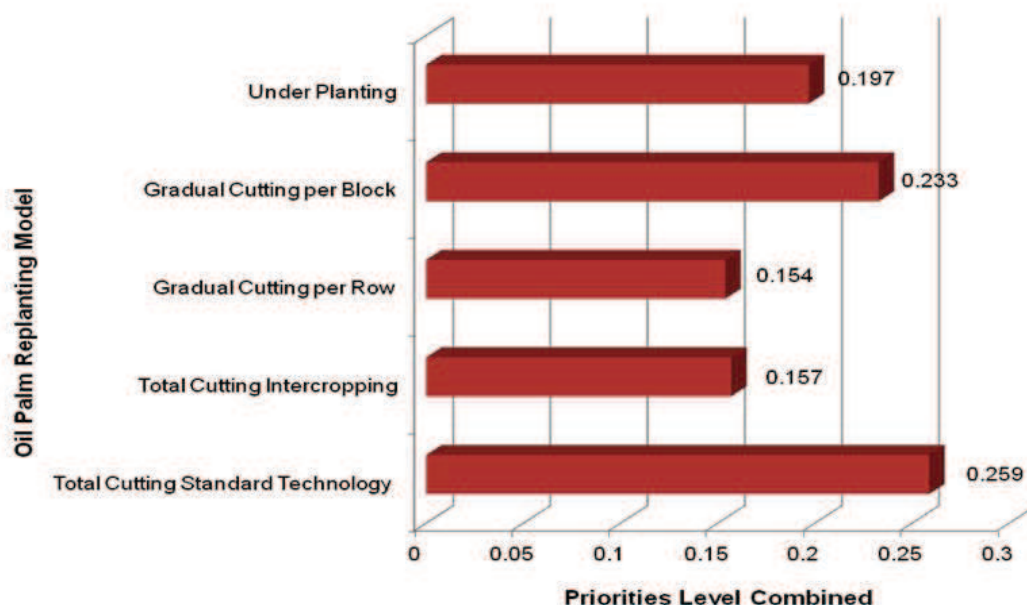


Figure 2. Comprehensive AHP Analysis of The Replanting Strategy

Learning from successful of IDAPERTABUN program implemented in Pekanbaru and considering the response of plasma farmer, it needs to convince majority of farmers whom not joint yet to IDAPERTABUN programs regarding benefits of the program through intensively socialization to all of group farmers.

The implementation of total cutting using standard technology requires renewing of NES/PIR partnership agreement, bank loan facilitation, availability IDAPERTABUN fund, seed and fertilizer facilitation, and production facilitation. Under the transparent nucleus-estate smallholder agreement, the roles of nucleus in providing certified seed and other logistics, skill upgrading and access support for smallholder farmers will assure the replanting can be implemented effectively. In other hand plasma farmers was suggested to adjust their life style to match with income deduction during waiting period.

In line with replanting plan, smallholder plasma farmers was suggested to focus on financial factor, continue Nucleus Estate Smallholder (NES)/Perkebunan Inti Rakyat (PIR) partnership, only using certified seed, get access to production facilities, and get support from enabler as facilitator and regulator.

NES Partnership (PIR Trans and KKPA) model which have been applied for more than 15 years and it have satisfied both PT AGROWIYANA and smallholder plasma farmers. The performance indicators of this partnership are quality of production facilities, accessibility to production facilities, miller capacity, communication and guidance to plasma farmers, board of cooperative (KUD) and Chairman of Farmers Group (Kelompok Tani). Involvement PT AGROWIYANA in the agreement contract may convinc farmers on the certainty of the program implementation.

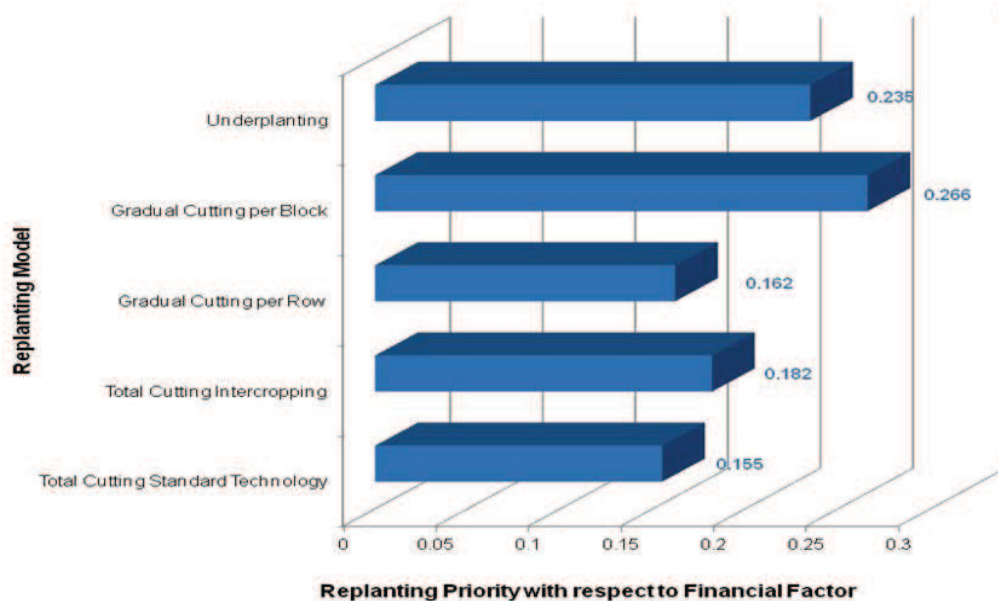


Figure 3. The Replanting Strategy with Only Considering the Financial Factor

CONCLUSIONS

Stake holder of plasma plantation at PT. AGROWIYANA realized that oil palm which was planted on year 1995 will pass peak production and start decline when reach 20 years old by year 2016. The replanting program is therefore needed to be well prepared, especially for plasm plantation. The most important factor for replanting implementation is financial. Results for AHP analysis indicated that total cutting with standard technology is the best strategy to be implemented.

To apply proper replanting program according to standard plantation, smallholder plasma farmers need assurance on certain conditions e.g. access of production/plantation facilities, access to funding facilitation and renew the partnership contract. As of December 2011, there are only 8,8% (400 farmers out of 4,538 plasma farmers) was confirmed participation in the IDAPERTABUN program,

Further research is recommended to explore the possibility of other funding svhemes (e.g. independent funding, bank loan, KPEN-RP) to complete IDAPERTABUN funding for replanting of plasma plantation.

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