

EARLY EDUCATION ABOUT AGROFORESTRY FOR CHILDREN OF HEGAMANAH VILLAGE, SUKABUMI, WEST JAVA, INDONESIA

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Abstract

The condition of forests in Indonesia suffered deforestation which is quite high. According to the research Matt Hansen (2013) the rate of deforestation forests in Indonesia reached 8.4% or the third most in the world. Indonesia forest conditions damaged by land use by people illegally. To cope with the Government making the program, this is agroforestry that function (1) reduction in the pressure on forests, especially protected forest and wildlife nature; (2) the more efficient in nutrient cycles; (3) decrease in flow rate and control of the surface, leaching of nutrients, and soil erosion; (4) the maintenance of the micro-climate; (5) the creation of favorable conditions for soil organisms; (6) the addition of nutrients to the soil through decomposition of organic matter and (7) the rights structure of the soil due to the constant cycle of organic matter. The current agroforestry is good development and contributes to the social and economic people, as happened in the village of Hegamanah. To preserve and develop the science of agroforestry then the need for early education about the science of agroforestry to children ages 5-12 years in the village of Hegamanah that they already have an overview/science of agroforestry and agroforestry science can develop later. The purpose of this research is the concept of education early on about the science of agroforestry to children aged 5-12 years. The method used with the explanation of the theory by way of telling stories and performing practice directly in the land. The results of this research show the interaction of enthusiastic learners get education agroforestry. According to the parents of this good education and needs to be applied early on to increase the love of children on the fields of agriculture and forestry.

Keywords: Agroforestry, Early Education, Hegamanah Village, Children

1 INTRODUCTION

The condition of forests in Indonesia nowadays got worse. This is because the rate of deforestation according to research from Matt Hansen (2013) has reached 8.4% or number three is the highest in the world. Causes the rate of deforestation is on the rise is the forest management in Indonesia have yet to reflect compliance with principles of good forest governance (good forest governance), and thus encourages the occurrence of forest degradation and deforestation are significant. Various literature States that the direct cause of forest degradation and deforestation in Indonesia, one of which is the conversion of natural forests into agricultural land and plantations.

In fact there are already solutions to forest management can run well and sustainably without having to convert forests into agricultural land and plantations. How to manage them is with the agroforestry system. Agroforestry system is the system of land use technology, in which woody perennials planted with crops and animals or with a particular purpose in a form of spatial arrangement or temporal sequence, and in it there are interactions-ecological and economic interactions among the various components of the concerned (Nair, 1989). This agroforestry system provides many benefits, including: (1) a reduction in the pressure on forests, especially protected forest and wildlife nature;; (2) the more efficient in nutrient cycles; (3) decrease in flow rate and control of the surface, leaching of nutrients, and soil erosion; (4) the maintenance of the micro-climate; (5) the creation of favorable conditions for soil organisms; (6) the addition of nutrients to the soil through decomposition of organic matter and (7) the rights structure of the soil due to the constant cycle of organic matter.

This system is already done in Hegamanah village, Sukabumi, West Java. However, the awareness and practice of agroforestry is still not up among the farmers of the forest. Conventional agricultural paradigm-monoculture-synthetic inputs (fertilizers, pesticides and ZPT) is still considered more economic guarantee for farmers. Even though agroforestry more warranties the sustainability of farming practices (sustainable

agriculture) both socio-economic and ecological farmers, as well as global climate change mitigation strategy. Agroforestry practices that comply with the goals and expectations, requiring a change of mindset for the next generation, especially the children of farmers are structured and integrated forest.

Hence the perceived need education about agroforestry that in practice in accordance with the expectations and objectives. Agroforestry education is given to children because it will give children the preparation to face the future periods to practice good agroforestry system. Early childhood education can be done since the age of 5 years. At this age, 75% of the developing child's brain. This development continues to advance dramatically by producing billions of cells and hundreds of trillions of connections within the brain. Education at age 5-12 years of age is a good age to learn. According to Byrnes, that according to early childhood education was important, because this is the age of the child in the form of education that is most flattering. At this age children must establish preparedness himself so that in the future became a farmer agroforestry who is successful in the fields of Economics and was able to keep the forest in order to remain sustainable.

2 EARLY AGROFORESTRY EDUCATION

2.1. Agroforestry in the village of Hegamanah

Agroforestry systems developed in the village of Hegamanah near forested areas Mountain Walat Education included in the land use Forest agrisilviculture Education Walat Mountain consciously plant to produce forest products and agricultural crops. Staple crops that are developed in the form of Producing Plants wood, namely tree resin, pine, puspa, Acacia, etc. Filler plants namely food crops such as cassava, banana, cardamom, coffee, corn, etc. These plants fill the land not planted staple crops are usually grown on the array's staple crops. (Foresta 2000).

2.2. Plant tuber Porang

Plant herbaceous plants is Porang and menchun. Stem erect, tender, delicate stems are green or black dapple (dots) white. Single rod break down into three secondary stems and will break down again at once into the stalk of the leaf. At each meeting the stem will grow a Brown nodule blackish Porang plant breeding as a tool. The plant can reach a height of 1.5 metres is very dependent on age and fertility of the soil (Robinson 1995)

2.3. Early Childhood Education

Early childhood education (Early childhood education) is education intended for children of preschool age children with the goal of keeping the child may develop apotensi-potensinya early on so that they can progress reasonably as a child. The goal of Early childhood education is so that children acquire the intellectual stimulus-stimuli, social, emotional and in accordance with the level of his age. (Curtis 1998).

2.4. The Purpose

The purpose of this study is 1.) The formation of the consciousness of children in cognitive, affective, and psychomotor against the importance of agroforestry. 2.) forest preserve and Present concerns of managing forests with agroforesti system early on to children aged 5-12 years through the film agroforestry. 3.) children participants can plant and tuber porang caring for plants grown with trees.

2.5. Method

Methods used in educational activities agroforestry this is a test of the concept of agroforestry education for children aged 5-12 years. The concept is as the following extension and the granting of material about Educational agroforestry, Applications of agroforestry, and monitoring. The concept of implementation of these activities can be formulated in the plan of implementation of the following activities

Table 1. Target and shape program

Activity	Activity Description	Result	Succes Indicator	Methods
Extension and the granting of material about agroforestry	<ul style="list-style-type: none"> teaching through audio-visual media Provide knowledge about the importance of forests Provide knowledge about the importance of agroforestri Explain the plants that will be used in the agroforestri is the porang bulbs 	Understanding of agroforestry in children is increasing through the visual media	80% students can apply message about agroforestry by either	Watch Video about agroforestry
Agroforestri Application	Planting and caring for bulbs plants grown as porang in forest.	Make habits and awareness of the importance of children's agroforestry	80% students and direct pull ank-anak planting and caring for porang as agroforestri plant bulbs	Action
Monitoring and evaluation	Conducting an evaluation of the implementation of the training and monitoring of applications and application program	The creation of awareness and the realization of a controlled soft skills continue to evolve (Improvement) about agroforestry	Retrieved data evaluation and monitoring programs as material improvements	Discussion

3. RESULTS

First targets , namely the formation of the consciousness of children in cognitive, affective, and psychomotor system of the importance of agroforestry. This is accomplished through training and demonstration programmes of education agroforestry.

Public awareness and the granting of material about agroforestry is the core activity of this activity is carried out by means of a video playback environment and health.Children in general are fond of watching movies. Video playback agroforestry aims to stimulate pupils through the audio-visual media. The aim is to induce and enhance awareness of the pupils of the agroforestry through an interesting impressions. At the end of video views, students are given questions about the message implied in the agroforestry video.

Application of agroforestry Education is carried out by way of action down the air. The action down air include the planting and maintenance of trees and plants. Previously, students are taught how to plant and care for a correct through video views Viewer and directly by the team.

The plant is the tuber is planted di hutan porang Porang typically due to the plant can grow in any soil type, however, in order for the cultivation of crops can be successful with good Porang need to know the things which are the conditions to grow the plant Porang, especially relating to climate and soil conditions. Porang plant has specific properties that have a very high tolerance to shade or shade (shade resistant). Porang plants need light only up to maximum 40%. Porang plants can be grown at altitudes of 0-700 M above sea level. But the most good on the area, which has an altitude of 100-600 M above sea level. For good results, the plant Porang wants the loose soil fertile and do not tarnish/(flooded). The degree of acidity of the soil the ideal PH is between 6-7 as well as on the conditions of any soil type. The ideal shade for the plant Porang is a type of Teak, mahogany Sono, and others, that staple of any shade and escape from a fire. The level of minimum 40% shade density so that more and better meeting (Robinson 1995)

The second external achievement , achievement children can grow plant for agroforestry . Because children can do and find out how good Planting. Overall evaluation of the cognitive aspect is done. Activity pre and post test-conducted every beginning and end activities to measure the level of knowledge of pupils. The

following is a table of changes in cognitive, affective, and psychomotor children educational games after following health and environmental action.

Table 2. Change the aspect of cognitive, affective, and psychomotor

Aspects	Result
Kognitif	Score of knowledge increased from 63 to 83 (delta 20)
Afektif	The kids are willing to follow the messages retrieved from the movie agroforestry
Psiko-motor	Kids do the planting and caring for plants for agroforestry

In addition to the responses from parents are also good. They agree with the holding of educational agroforestry in order that their children know early on about agroforestry. According to them the concept of being held is also good.

4. CONCLUSION

Agroforestry education need to be implemented to children is needed in order for the preparation of the child children facing the future periods to practice good agroforestry system. The concept of a good agroforestry education is to provide the material in audio visual and practice materials who had he obtained.

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