

# ***Nuan-Nuan* as Local Wisdom in the Processing of Corn Plants as the Karo People's Livelihood**

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**Abstract:** This paper discusses a knowledge (*nuan-nuan*) Karo people in the processing of corn plants that serve as the livelihood. Utilization of the corn crop in particular for farmers is a source of livelihood for generations takes place. Processing corn plants that produced today is still done traditionally with local knowledge nuan nuan. Karo ethnicity is farmers tough, resilient and has a broad contribution to classical agriculture. This research was conducted with an ethnographic approach with a participatory observation technique, interview, and documentation. Corn is a plant that is used as a livelihood for the people of Karo generally as a farmer. Processing corn plants resulting from the processing plant can be seen starting from how to plant are still traditional knowledge (*nuan-nuan*) in the communities Karo. Processing plant corn with a strategy that is still traditional, but a tradition from generation to generation is the people's livelihood activity Karo surviving until now.

**Keywords:** *nuan nuan*, local wisdom, corn, livelihood

## **1 Introduction**

Ethnic diversity in Indonesia with a distinctive and unique culture is a particular feature of Indonesia. North Sumatra provincial agrarian one, in some districts the majority of the people are farmers work. One of them, whose capital Karo Kabanjahe. Karo is a typical area with its culture and one of the districts that have a tourist village in North Sumatra. Natural richness excellent to support tourism as a destination reliable Karo makes the tourists who visit the North Sumatra. Conditions in the Karo in general as farmers because the natural potential is extremely strategic. In some districts obvious that a source of livelihood society is the use of land for planting vegetables and corn. Karo is a farmer tough, resilient and has extensive contributions to the classic farm in East Sumatra. People need social welfare (social welfare) for growth, equity and sustainability [1]. This is evidenced in the Dutch colonial period Karo farmers can export cabbage and potato to Malaysia and Singapore. The changing concept of classical farmers into modern farmers started zending Dutch arrival time, they have introduced a modern plant, so the cabbage and potatoes into a satisfactory result at the time.

Karo has 17 (seventeen) districts and one of them is the District Tiganderket. Tiganderket society beginning to grow rice because it had good irrigation, but the lack of understanding of farmers in the breeding and processing of the land so that the result is less than adequate. Then farmers grow citrus, but they were not able to make the oranges well as improved crop and losses because of many rotten oranges before harvesting. Specific sub as in Kuta Buluh,



Village Fruit Kingdom also be a special object location of this research, in addition to corn plantation crops are also cultivated as chocolate, hazelnut, and coffee, but the soil is fertile and potential will not guarantee the survival rates being qualified and generate profits many. From this condition, we can not know that it turns in Tiganderket village farmers do not grow fruit or vegetable as most sub-districts Karo ground, but grow corn, hazelnut, and coffee. But the result was also inadequate.

Based on this phenomenon it is of interest for review of the Anthropological perspective by looking at the social, economic and production of such farmers. Based on this, it is known that factors causing farmers in this district are less satisfactory in harvesting crop production. Besides the problems that arise in Karo farmers so that the result is not able to improve the economy of farm families in particular. Subsistence farmers regarded as a coolie and have a lower class stratification (lower class), but this paradigm can not eliminate thinking in the context of Indonesian society in general, because this assumption is still inherent in the view of our society [2]. But farmers are also economic actors (economic agent) and head of the household. The land is a single economic unit and household.

Various opinions Wolf can be described that farmers need to be considered because of its existence as an indicator of economic actors in supporting a regional economic growth rate of motion. Likewise with the farmers in the district's Tiganderket in Karo. At first, the farmers in this village grow rice but changed into corn plants and plantations of cocoa, hazelnut, and coffee. Changes in crops produced by farmers in this village due to the adjustment factor and imposed requirements for their willingness to undertake agricultural involution [3]. These changes, according to Scoot is the villages as a whole can be gradually switched from growing rice to growing corn and potatoes to add calories in their food at the expense of other nutritional elements that are often detrimental to their health [4]. But in this district farmers to switch from food crops to commercial crops due to the needs and physical environment. Karo people make their livelihoods, but the environment as the built environment is a public good that natural and social environment [5]. The thought likewise stimulated by the state of farming families classified as poor and a response to meet the needs of the family.

Such conditions as said Popkin [6]. Security as the most important given that farmers are poor and always close to the line of danger, so the decline slightly towards the production can cause a major disaster for the survival of their households. Security most important is called the principle of "precedence safely (safety first)"[6], In this case, the farmers in the district Tiganderket not want to risk failure rice harvest this crop even though the change does not guarantee the welfare of his family. In people who have subsistence farmers, especially corn, Karo society has the knowledge gained from our ancestors called as Nuan Nuan. Karo public knowledge this is the traditional wisdom which is attached to the Karo tribe and is essential for life in law and culture in communities Karo (living law/living culture) [7].

Karo has a knowledge of cultivation used for generations and becomes a local custom (ingenious). Karo's identical community with local ethnic refers to this knowledge with term-Nuan Nuan. These insights are not much different from the knowledge that is used in the agricultural system in general. What distinguishes the public is Karo obtain this knowledge from their parents, the ancestors who apply farming knowledge naturally and continued from the previous generation to the next.



**Fig. 1.** The agricultural area corn Karo society

## **2 Research methods**

The research was done scientifically with qualitative methods and a more focused approach to ethnography. The process of determining the informant is not based on the number of informants in the field used as a source of information. Research shall outline a vision of reality-based directly derived from naturalistic information. Determination of informants also not based on the number of informants in quantity but the main information obtained can be described based on the findings of the field. It is like that done by [8] which is popular with the term thick description. An ethnographic approach is conducted in-depth approach to the public. Information obtained from the society described by nature is a knowledge that is in the public mind. Knowledge of the rules imposed a known hereditary an emic view. This study uses data collection techniques by observation of participation, a thorough interview and data collection activities photos farmers in corn processing is done through a technique *Nuan-Nuan*.

## **3 Results and discussion**

The community has a tradition known as there are regional (local wisdom) which is a national symbol, but the era is now almost no longer has significant meaning in the age of globalization [9]. Local knowledge is the fruit of the collective mind of the people who built together, mutually recognized and implemented together. Sourced from life experiences individually and collectively raised belong together. A way of life used to face and cope with everyday problems even recommended for use by the next generation into the future. Coloring community wisdom operationalization of work in finding and managing living resources. Environmental wisdom is a complex system that is beyond the individual and affects every organism that is in the sea, land [10]. Knowledge hereditary (transformative) owned by communities to manage the environment. Knowledge which spawned behavior as a result of adaptation to the environment, so that bear positive implications for the preservation of the natural environment. Community awareness of the environment consists of the physical nature of knowledge, knowledge of natural phenomena, knowledge of technology systems and equipment, knowledge about abstinence, fairy tales, ceremonies related to technology, a

social-cultural background of the local people especially in the preservation of the environment. Sources of livelihood consist of agriculture, fishing, animal husbandry.

Based on the research results obtained by plant data unsatisfactory production because (1) all types of plants require growth requirements, for example, (a) at what height from the sea level, (b) soil pH that is suitable for the type of plant, (c) the texture and structure land, (d) rainfall, (e) the climate and more. (2) soil tillage. This is done because some types of plants require perfect soil tillage, moderate or simply by TOT (Sports Without Land) can grow, (3) seeds. Many farmers do not know the relative merits if there is any seed origin, whereas most seeds determine whether the poor productivity of plants and get maximum. As for the types of seeds used by farmers is (a) local seed, (b) the national seed and (c) the seed introduction/hybrid.

Factors (4) fertilization. Lack of knowledge of farmers on the type, dose and time how to use lack of effectiveness of crop production in the District this Tiganderket. Many trademark fertilizer assortment of the content therein and the chemical constituents that adversely affect the crop. (5) maintenance of the plant. Supposed to obtain quality crop farmers do maintenance to the maximum. (6) control of pests and diseases. It is known that the level of education of farmers is still low and interest in reading less so as to overcome the problem of pests and diseases in crops especially maize is generally not able to be addressed properly because of lack of knowledge obtained by the farmer, for example on the use of pesticides is an act of preventive can be done by farmers.

Furthermore, (7) post-harvest treatment before harvest. This means also need to be considered to obtain a quality crop. From the description that such conditions of farmers in district Tiganderket could conclude that that allows a reduction in production or make plants do not produce are (1) lack of knowledge corn farmers to obtain information about the method of planting, management of land and corn crops with good maintenance, (2) the lack of expertise of farmers to produce good corn crop yield, (3) farmers' lack of capital, (4) the unfavorable climate, (5) seeds, fertilizer is not good so obtaining yields less than satisfactory farmers.

Viewed from the standpoint of anthropological, Karo farmers in general and farmers in particular Tiganderket unsatisfactory corn crops and farmers often have problems. This is due to several key factors, among others: (1) Marketing, to take advantage of the agricultural produce of various types of plants that exist in Karo needed good marketing level. Agricultural produce in Karo is now only able to penetrate the local market in North Sumatra alone. And strangely Karo Regency identified with the plant producing especially fruits and vegetables instead of buying directly into place, especially in the area of Berastagi more expensive than we buy outside the city. It is related to other than agricultural areas Karo is also a tourism area with panoramic views of outstanding natural beauty as it is surrounded by Sibayak mountain, (2) price.

Based on information obtained from farmers linked to the price of corn, in particular, is often a fundamental problem because of fluctuation. This condition is caused farmers sometimes inconsistent with the plants to be planted, farmers tend to be more concerned with big profits by planting crops that sell well at the time, so that the plant previously neglected. And finally, farmers suffered heavy losses in this case. This condition is also caused by a lack of understanding of farmers going about it because of the information obtained by farmers from the related department also inadequate. The weather problem also triggered the failure of a corn farmer in Karo. Under the conditions described above, especially farmers corn growers still retaining local knowledge in the processing of corn. This is done on the principle

that the public's knowledge handed down from ancestors became fundamental for corn farmers who remain maintained.

Traditional knowledge is still applied by Karo tribe Tiganderket particularly in the area turned out to be a background of their estates to keep providing the best results to meet their daily needs. This is done as well as an effort to preserve the local culture that still exists to this day. The knowledge acquired by generations and is taught by parents to the next generation. Activities are undertaken through *nuan-nuan* how to view activity on an ongoing basis. Knowledge of farming (*nuan-nuan*) has values of local wisdom to be maintained so that it becomes an identity strengthening the Karo tribe. It can also be used as new knowledge in farming activities undertaken by the public outside the Karo tribe. This knowledge becomes public knowledge base Karo in planting (*nuan-nuan*) and has a value of knowledge that is very useful for everyday human life and become a high cultural value for the people of the Karo. Local knowledge is becoming an alternative to the Karo people to maintain corn plants as the people's livelihood. Karo people's incomes in the management of *nuan-nuan* maize crop could be used for food animals such as bulls that can produce quality milk. The utilization of corn crops for animal feed to increase the income of society can be seen in the Figure 2 below.



**Fig. 2.** The use of corn plants for animal

Local knowledge (*nuan-nuan*) by the Karo society in the management of the corn crop is used as a livelihood, but can be manufactured into other knowledge society represents a new way in the use of corn crop to supplement income sources of livelihood such as of society. Utilization plants corn is *nuan-nuan* done but can be processed into new income is a way for farmers to survive, especially as livelihoods Karo. Management of corn plants as a source of Karo people's livelihood can be seen in the Figure 3 below.



**Fig. 3.** The results of the processing of the corn crop

Local knowledge is a basic principle that is conceptualized as local policies (local genius). Local knowledge can be understood as an idea of life and preservation of values inherited from the ancestors of an ethnic community that oriented the sustainability of human life marked with the symbol embedded in the society. Local knowledge society a previous Karo corn crop processing slowly started to rise with the influx of technology. It is like the study of the community in the village craftsmen Sanan. The formation of a new cultural wisdom of the impact of globalization in this area have an impact on home industry due to raising the living standards of citizens [11].

At this time the Karo people keep doing the planting of corn is *nuan-nuan*, but for agro-processing corn crop is not fully processed based on local knowledge. As well as processing for animal feed that has been processed using a machine that can produce better corn crops and qualified. Processing corn plants this incorporated into a grinding machine and according to information from the district that the processing of corn that has been selected will be able to produce 30 tons/day which is done by six people the worker Tiganderket sub-districts. Processing plant corn by using a grinding machine can be seen in the Figure 4 below.



**Fig. 4.** Processing machines corn for animal feed

Processing of corn plants as a livelihood while maintaining local knowledge can also be used as the raw material manufactured into household materials. Karo society, especially in district Tiganderket cultivating corn, but waste can also be used as a household necessity. According to public knowledge, Karo in the district sewage treatment plant corn can be used as a place of eggs when processed efficiently. According to information from the district as well that the finished corn waste will be burned and usually people can make it as waste burned and the ashes can be used as the manufacture of egg tray that can be sold and increase the income of the community.



**Fig. 5.** The processing of corn for household waste

Based on the results obtained that local knowledge in the processing of corn plants that survived performed by nuan nuan still performed by the Karo people. However, the processing of corn plants as a source of livelihood to improve the economy in the fulfillment of daily needs is also carried out but the public still acquires knowledge acquired by the habit of hereditary and passed down to the present.

#### 4 Conclusion

Karo community knowledge systems in growing crops especially maize crop have a high value in the Karo people. Activities undertook farming community in the processing of corn crops used as livelihood their eyes. It is a knowledge that unique assessed and passed on to the community-wide. Geographical tribes, in general, are in mountainous areas can take advantage of their fertile land to grow crops, especially corn. The ability of farming can be supported with knowledge and tools that are not commonly used in farming activities in general. Based on the results of the research can be described findings that a knowledge that is rare and abandoned people are still maintained by the Karo people, especially in the processing of corn plants called *nuan-nuan*. Local communities choose to use the knowledge of farming based on knowledge with them shorter processing system and practical. Karo tribe already knew knowledge in the planting of the previous generation and can pass it on to the current generation. However, the processing of corn plants as a livelihood today can be done with technology capable of producing faster and increase revenue Karo society.

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