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**| RESEARCH ARTICLE**

# Cultural Practices & Beliefs in Abaca Farming of the Indigenous People

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**| ABSTRACT**
Abaca (Musa textilis) is a plant related to the banana, the leaves of which provide one of the strongest natural fibers used by man. Abaca farming is vital in boosting the national economy, and it serves as a potential source of incomefor growers (Biccay,2016). Furthermore, the indigenous knowledge of abaca farming has been proven effective through time and experience. However, there was a scant study about indigenous knowledge on abaca farming and abaca farmers in the Province of Aklan, Philippines. The indigenous people used traditional tools, equipment and ways in phases of producing, processing and marketing abaca fiber. The processes in their production phase were the preparation of the tools, clearing and preparation of the land, preparation of plants, planting, and maintaining plant health. In the processing phase, the processes were: preparation, topping, tumbling, tuxying, extraction, drying and bundling. While in the marketing phase, the processes were: carrying fiber, meeting with the assembler and transporting fiber to the market. The cultural beliefs in abaca farming were drying of suckers, *padamguhan* (response of deities based on dreams), *sonata sa kataeonan* (music in the forest), *sapat nga pihakan mata* (cyclops), prohibition of cooking in the abaca field, and rituals for good luck and thanksgiving for their good harvest. The Aklanon – Bukidnon Indigenous People faced several problems and challenges in abaca farming, and because of their innate positive qualities, they made their own coping mechanisms in order to continue living and avoid delays in their work and income.

**| KEYWORDS**

Abaca Farming, Culture, Practices, Indigenous People, Producing, Processing, Marketing

**| ARTICLE INFORMATION**

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## 1. Introduction

Abaca (Musa textilis) is a plant related to the banana, the leaves of which provide one of the strongest natural fibers used by man. It is being distributed around the world, supplying 87% of the world's requirement for the production of cordage, speciality papers (for currency notes, stencil paper, teabag, coffee filter/cup, capacitor and insulation paper, etc.), textiles, furniture and fixtures, handicrafts and other industrial applications. Thus, abaca farming is vital in boosting the national economy and it serves as a potential source of income for growers (Biccay,2016).

Indigenous knowledge has been proven effective through time and experience. However, there was a scant study on indigenous knowledge of abaca farming and abaca farmers in the Province of Aklan. Further, with the advent of technology, abaca farmers have been searching for modern ways to expedite the farming processes and increase the productivity of abaca fibers. With this, there is a danger that the indigenous abaca farming practices of *Aklanon-Bukidnon* may vanish.

The problem was similar to the study of Galibu and Tindowen (2015), which mentioned that the government of Tuguegarao, Philippines keeps on proposing new technologies to use in farming. However, since farmers cannot afford to buy or generate new technologies they rely on traditional ways of farming. Hence, a study was conducted to determine the different rice farming methods, tools and indigenous beliefs used by the *Itawes* farmers of Tuguegarao City, Philippines. These indigenous knowledge

farming practices have been more significant now than ever to encourage more people to take part in them. In the face of threats to local culture, this research would impart the efforts of recording and preserving the ancestral wisdom before they completely dissolve with time and be diluted with mainstream and modern knowledge.

Moreover, this study will also benefit future researchers regarding the topic and eventually strengthen the pursuit of expanding the body of knowledge on culture respective to environmental conservation and enhancing the capacity of our local people toward ecological biodiversity.

The study was also connected to the study of Waller and Wilsby (2019) about studying indigenous abaca farming in the Philippines and the sustainable agriculture is culture and location specific. Future researchers could learn a lot from the empirical and accumulated wisdom of the indigenous people specifically the *Aklanon-Bukidnon* who had thrived for centuries. For indigenous knowledge on farming to prosper and flourish through time, it is important to teach the different farming practices to the younger generation more intensively. Hence, the purpose of the researcher in conducting the data is to collect, record, preserve, and analyze the traditional practices to ensure the preservation of culture, to improve the production, processing and marketing of abaca and to improve the life of abaca farmers.

## 2. Literature Review

### *2.1 Abaca Farming Practices*

Abaca is a plant native to the Philippines. The plant is harvested for its fibers and is often called Manila Hemp. Despite the name, abaca is not a hemp plant but is included in the Musacea (banana) family (Cook, 2001).

The abaca fiber is considered to be the strongest of the natural fibers, three times to be stronger than sisal fiber. It is also biodegradable and sustainable, extensively used to produce ropes, woven fabrics, tea bags, etc. Further, it is far more resistant to saltwater decomposition than most vegetable fiber.

Compared to synthetic fiber like rayon and nylon, abaca fiber possesses higher tensile strength and lower elongation in both wet and dry states. The Philippines is the world's largest source and supplier of abaca fiber for cordage and pulp for specialist paper. It supplies 85% of the needed abaca fiber around the globe (Richter et. al, 2013).

Being the fiber that made the Philippines known around the world, abaca plays a significant role in the national economy. According to Fiber Industry Development Authority, the country dominated in supplying the total world abaca requirement in 2008 with more than 85 percent shares and has been one of the major foreign exchange earners generating at least more than US$80 million annually. It is also a pillar of employment generation, sustaining more than 1.5 million Filipinos who directly or indirectly depend on it for a living (Delmo, 2012).

Representatives from FIDA noted that while Region VI is not famous for its abaca and only takes a small portion of abaca production in the country, 70-80 percent of Aklan's produce comes from Libacao (Mojica, 2008).

As part of the Rationalization Plan of the Department of Agriculture, the Philippine Fiber Industry Development Authority (PhilFIDA), is tasked to organize, develop, and sustain the fiber industry in the Philippines. The agency determines to identify the problems, and challenges in abaca farming and to meet the global requirement in demands for renewable and environmental-friendly materials. The PhilFIDA pursues a range of programs, particularly for the development of disease-resistant and high-yielding planting materials, a sustainable disease management program, improved fiber extraction machines and the acquisition of sustainability certification for the production of high-quality abaca fibers Researchgate, (2020).

#### *2.1.1 Production*

The abaca plant usually grows in loamy soils with high hand content and provides good drainage of the soil which makes the abaca thrive (Spencer, 1953). It grows in areas with a temperature of around 20 degrees Celsius during the cold months and around 25 degrees Celsius or even warmer during the warm months (PhilFida, 2016).

Abaca plant was also sensitive to drought and only a few weeks of dried out soil will affect the final quality of the fiber (Armecin et. al, 2014).

Furthermore, the abaca has been reported to be easily damaged during windy conditions. This is a clear challenge since part of the country is covered by the typhoon belt. Typhoons tear the abaca leaves off and could even break the whole stems which of course affects the production of fibers by reducing the yield.

The way of establishing the abaca in the field through tissue culture takes three to four months. This counts from planting the plantlets within the nursery to transposition to the plantation site in the fields. The clear advantage of using tissue culture is that it is possible to produce plantlets free from diseases (Armecin et. al, 2011).

Though the more traditional way of propagation is done from seeds. Grow from seeds results in advantages since it does not require high costs and hence is affordable for farmers. Though at the same time a healthy and good quality "parent plant" will not assure a corresponding seeding quality. It is a fairly easy methodology and one of the most important factors is that seeds possess a greater resistance to diseases and drought. The seeds are derived from plants that are confirmed disease-free either through diagnostic tests or just by visual inspection. The plants go through a hardening process for two months and by the time they developed five leaves, they are ready for plantation in the field (Goltenboth and Mühlbauer, 2010).

In addition, the abaca could be propagated through suckers in two ways. The first way includes the suckers being cut off the root from the parent plant without damaging the original plant. These suckers will result in an identical version of the parent plant; hence, a good quality sucker can be assured by proceeding from a reliable, productive and high-quality parent plant. The parent plant could produce around 10-15 suckers ready for replantation. Compared to seedlings, the plantlets derived from suckers would mature more quickly but at the same time, they have to establish their own root system which means it was not the fastest way of obtaining plants ready for harvesting. There was a faster method to obtain suckers that mature faster. This method was more costly but will result in less time from plantation to harvesting. This way of using suckling would destroy the parent plant since the rootstock was being dug up and divided into pieces containing sucker-shoots which are then planted. An advantage of this method is that the rootstock pieces already got a developed root system though it would eliminate the parent plant (Oringo, 2001).

### *2.1.2 Processing*

According to Shahri et. al (2014), the abaca is harvested by hand continually approximately every five months after an initial growth for one to two years. The plant is exchanged after around ten years and another initial growth period is introduced. It is important for harvesting to take place at the right time to get the desired properties of the fibers. The time of harvesting is also correlated to the yield of fibers.

Richman (2002) mentioned in her study that the harvest of abaca in Baybay, Leyte, Philippines which usually happens twice a year, happened more often whenever the households needed money immediately.

The actual harvesting and extraction of fibers can be summarized by steps which include:

**Tuxying.** This takes place when the appearing green leaves of the abaca have been cut off the pseudostem. The tuxying includes separating the leaf sheets building up the pseudostem and then separating the outer sheath layer from the inner leaf sheath layer. (CFC/UNIDO/FIDA,2004).

**Stripping by hand.** The most common method of stripping is by hand, using the *hagotan*, which can be translated as a "pulling machine". The machine consists of a straight knife or several blades (stripper)set into a knife rest or base, which can be clamped shut or released with a foot pedal (Richman, 2002). The stripping is either done by hand or by machine to different extents. Manual stripping is a primitive way of fiber extraction which gives low investment costs in comparison with more improved methods. The hand by stripping includes the tuxies being placed between a blade and a block of weight which presses the tuxie against the cutting-edge of the knife. Sometimes the knife could be serrated to facilitate the extraction of fiber bundles which usually is a very physically demanding labor (Franck, 2005).

The tuxie is then manually pulled perpendicular to the cutting edge which leads to an extraction of the tuxie fiber bundles of abaca. Since the thickness of the obtained tuxies varies, the width between the blade and the block can be adjusted by a pedal hence pressure against the cutting-edge is therefore adjusted to fit each tuxie. The whole tuxie is not stripped in one pull since the stripping operator needs one end of the tuxy to grab as he or she pulls it over the knife and therefore needs to do a regrip to strip the other end of the tuxie as well. In connection, the reason for doing the tuxying to extract the outer part of each leaf sheath is to make the pulling of the tuxie along the cutting edge of the knife easier and to ease the burden of stripping. This indigenous method is obviously a disadvantage for the farmer productivity but it is an easier way to get business with since it requires low investment costs (Richter et. al, 2013).

**Drying.** The obtained fibers are then either dried under the sun or in a mechanical drying process. The latter is a more abundant method in Central America rather than in the Philippines, just as mechanical stripping. Both of these are due to poor financial

strength in the Philippines. A vast majority of the tuxies are still stripped by hand, about 80%, and mostly carried out in the regions like Mindanao and Leyte (Lalusin and Villavicencio, 2015).

**Bundling.** After stripping, the bundles of fibers contain about 60% of moisture which needs to be dried away as soon as possible to 14% content of moisture to avoid discoloration. Staining will also lower the generation of income due to poorer quality. The bundles are hung to dry in the sun which takes about three hours in optimal conditions during the rainy season this could take days (Cai, et. al, 2015).

### *2.1.3 Marketing*

The dried and bundled fibers-frequently weighing about 50 kilos-are carried downhill from the plot to the village, on the shoulders and head of the farmer while he maneuvers through forest and streams (Richman, 2002).

The largest piece of the abaca production sector is the farmers with about 77,500 farms in the country where some are organized in cooperatives. Compared to Ecuador where the abaca production is concentrated in larger industrial farms Filipino production is carried out by small farmers or cooperatives who are responsible for the farming, stripping and drying processes (Lalusin and Villavicencio, 2015).

In addition, the abaca market flow is filled with intermediate buyers between farmers to Grading/Baling Establishment. Usually, farmers supply the local village dealer which further distributes to a town trader storage which in turn provides the Grading/Baling Establishment with abaca fibers. Due to the lack of knowledge among farmers about the official grading system constructed by PhilFida, no consideration about grades is taken in the first steps of distribution. These middlemen between farmers and GBE are risking lowering the farmer's income since higher grades of fibers risk being mixed together with lower grades and hence lowering the total quality of fiber (PhilFida, 2016).

### *2.2 Cultural Beliefs in Farming*

According to Maroyi (2012), indigenous systems of crop production emerged over centuries of cultural and biological evolution and represented the accumulated experiences of indigenous farmers. The farmers produce indigenous crops through knowledge of environmental conditions of change without access to external inputs, capital and modern scientific knowledge.

Further, Netting (1993) stated that after centuries of cultural and biological evolution, communities have developed locally-adapted, complex farming systems that have helped them manage a variety of environments to meet their subsistence needs.

### *2.2.1 Indigenous farming practices*

According to Rankoana (2017), community members use their indigenous farming practices such as planting on different soil types, soil fertilization, selection and storage of seeds and maintenance of crops. In addition to these knowledge systems, the community members mentioned the use of rainfall forecasts. These indigenous knowledge systems are produced by local people based on their lived experiences.

### *2.2.2 Use of celestial bodies to predict rain*

Elia (2014) mentioned in his study that Chibelela farmers' use of celestial bodies to predict rain is corroborated by the use of the moon and the stars. He also found out that farmers use the moon's shape and colour as signs to predict a season of either sufficient or scarce rainfall. Moreover, they also use the movement of the stars to make inferences about the rainfall patterns for a specific season of the year.

Tella (2007), in his study, concludes knowledge of plant phenology, and the appearance and shape of the moon and stars are used to plan the planting of crops. Further, the study explains that subsistence farming is sustained by indigenous farming practices and rainfall prediction. The practices involve the improvement of soil structure, maintenance of crops, and the selection and storage of seeds for replanting.

### *2.2.3 Offering to Supernatural Beings and Spirits*

The study of Galibu and Tindowen (2015), tells that the Itawes Farmers of Tuguegarao believe that offerings to supernatural beings, gods and spirits should be done for a good harvest. Farmers offer the head, organs, and feet of native chicken (*manut*) before planting to honor the gods or spirits and after harvesting for their thanksgiving. Some of the Itawes rice field farmers offer only the blood but others offer either the head, organs or feet of the chicken. While some combine the sauteed head, feet, organs and blood for *tunnag* (offering). The organs of the chicken symbolize the good production of grains. Aside from those, most of the Itawes rice farmers used gin as an offering because of its affordability in the Philippine market and it hooked the taste preference of the farmers. They put it on a plastic cup to offer before planting and after harvesting. This is to rid the unwanted spirits or

entities and welcome the desirable spirits. Some of the rice farmers also do this to bring good luck and thanksgiving. Further, it was also found out that almost all of the rice farmers used the *pinassug* or Biko rice cake as their offer. Other cooks the sticky rice without any other ingredients. This is offered by the farmers in order to have the good fortune to stick and to have a good harvest.

### *2.2.4 Belief in spirits and beings*

In "The Creatures of Philippine Lower Mythology", Ramos' dissertation (1990) on the spirits and beings throughout the archipelago, is filled with strange and wonderful superstitions. Many of these he attributes to early animist belief structures that evolved into polytheistic religions and were eventually absorbed into Catholicism – much to the chagrin of the Spanish colonizers. Leading the pack of believers in these superstitions were the farmers.

In one story, workers told a farm owner not to put his new tractor path going past a certain tree. When the farmer did anyway, the tractor stopped working for a large part of the day every time it passed.

He also recounted stories where workers opposed the use of mechanical tools because the sound would disturb the spirits living in the fields and other nearby trees. In another example, workers refused to clear a tree from the farmland. When the farmer took the axe to the tree himself, he came down with a serious fever.

Another study conducted by Hilario et.al (2008) mentioned that Aklanon-Bukidnon's harvested rice by doing a preparatory ritual performed by medico or skilled called *mag-buo* to prevent *tagwhay* (caused by dead evil spirits) (pre-harvest prayer) was conducted for these days seven bunches or *upongs* consisting of seven stalks were cut from the chosen spot where the farmer would get his binhi or seeds. These seven *upongs* or rice stalks were piled crop like and tripped with blessed coconut palm. Harvest would start after three days. They also believed that every member of the family was home. The first time the newly harvested rice was eaten. The youngest of the siblings was given his share first.

### *2.2.5 Local Knowledge: Indigenous Early Warning*

In the study of Howell (2003), in Bangladesh, older people shared their local early warning indicators.

**Weather patterns.** The sky turns gloomy and overcast, with black rolls of cloud, weather is unusually hot and humid/hot spells after rain, a strong wind blows from the south/southeast and the east wind blows at a full moon.

**River patterns.** 'Gorrom goroom' noise in the river and pond and river water becomes hot.

**Animal behavior.** Cattle/dogs wail continuously/at night, ants climb trees with eggs on their backs, birds fly without destination, increased number of flies and mosquitoes and insects attack cattle.

## *2.3 Problems, Challenges and Coping Mechanisms*

### *2.3.1 Problems*

Some of the problems that confront the Philippine abaca industry include poor technology adoption by farmers, lack of high-yielding and virus-resistant planting materials, and prevalence of pest and disease pressures. Furthermore, a lack of framing technology and management is contributing to the unfulfilled demand. Without the necessary knowledge in abaca farming, the productivity in the farms cannot reach maximum capacity. Additionally, due to the small size of the scattered farms in Bicolandia, PhilFida does not have the capacity to monitor all farms. Therefore, the means of reaching out with new knowledge to farmers is limited (Armecin et. al, 2011).

### *2.3.2 Challenges*

Farmers in the community have been affected by different extreme weather conditions with the typhoon as the most experienced calamity that hit the locality. These extreme weathers have brought negative impacts to abaca such as damage, discoloration of fiber drying or decaying of plants and pest infection. All of these result in low productivity and loss of income.

Extreme weather conditions also result in poor soil quality and make the land crack in extreme heat, and acidic during prolonged heat (De Guzman, 2011). Extreme rainfall can carry away fertilizers resulting in poor soil quality and prolonged rain makes the land soft causing landslides and affecting also the soil quality. (Pesimo, 2016).

Aside from natural disasters, the abaca production in four regions of Luzon, Philippines has a hard time meeting the high demand from the market due to nutrient leaching. Maintaining a nutrition full soil is a common struggle at abaca plantations and depends

on multiple circumstances. This is due to what Battad et.al. (2005) mentioned in their study that in some farms the harvest is transported away from the field and therefore none is reimbursed into the ground as a natural cycle of nutrition.

Another major obstacle is several pests of different kinds that can infect the abaca plant. There are five major groups of pests; fungal diseases, insects, bacterial diseases, nematodes and virus diseases.

### *2.3.3 Coping Mechanisms*

It is interesting to note that farmers in Camarines Sur know how to cope with extreme weather conditions and adapt strategies towards their plants whenever extreme weather conditions strike in their locality. Some of them are negative but the majority are positive and beneficial to farmers in sustaining their farming system.

In addition, it was revealed that farmers use crop rotation, in between cropping and planting alternative crops like sweet potato, cassava and monggo in acclimatizing to extreme heat or weather.

These strategies are positive and beneficial during a typhoon, when all crops have been destroyed, farmers can do nothing but plant again. In terms of their income, the farmers can cope with their income during typhoons. In other extreme weather conditions, they have no alternative means of increasing their income such as loans, financial assistance or crop insurance (Pesimo, 2016). Farmers do have positive and negative coping mechanisms in the advent of extreme weather conditions in their locality.

Most of their coping mechanism is done before but, in some cases, coping mechanism is done after the occurrence of extreme weather. Farmers have no coping mechanisms to address the impact of extreme weather on income except during typhoons when they can still convert crops to money or by harvesting their crops before the coming of the typhoon.

To cope with the soil quality, farmers in four regions of Luzon, Philippines allow their crops to decay during prolonged rainfall and serve as soil conditioners. According to the farmers, this practice would convert the decayed plants into fertilizers and condition the soil, thus improving its quality and increasing its quality (Battad et. al., 2005).

## 3. Methodology

### *3.1 Research Design*

A qualitative type of research was used in this study to describe results for production, processing, marketing, cultural beliefs and problems challenges and coping mechanisms.

### *3.2 Locale of the Study*

The study was conducted in Libacao, Aklan, Philippines specifically in Barangays Dalagsaan, Manika, Oyang and Rosal. Libacao is landlocked in the coastal province of Aklan, Philippines and classified as a third income class municipality. It has a land area of 254.98 square kilometers or 98.45 square miles which constitutes 14.00% of Aklan's total area with 58.4 meters (191.4 feet) estimated elevation above sea level (PhilAtlas).

The town is situated on a mountain range which makes traversing the area difficult. However, it is rich with natural resources and favorable weather for agriculture, which allowed the town to become the leading producer of abaca fiber in Region 6. It is also the home of the *Aklanon-Bukidnon*, a culture-rich indigenous people (Philippine Statistics Office, 2018).

### *3.3 Participants of the Study*

The participants of this research were the 8 *Aklanon-Bukidnon* Abaca farmers of Libacao, Aklan. The researcher has chosen two (2) in each of the Barangays Manika, Oyang, Rosal and Dalagsaan.

In order to identify and gather the participant-farmers, purposive sampling was used through a site selection approach and networking utilizing the following set of criteria such as; must be a resident of the selected barangay Manika, Oyang, Rosal and Dalagsaan;
must be an abaca farmer either the land owner or a tenant in Manika, Oyang, Rosal and Dalagsaan; must be an *Aklanon-Bukidnon;* and must be practicing abaca farming for 10-20 years

### *3.4 Data Gathering Instrument*

The data gathering instrument used in this study was the interview guide and observation notes.

The interview guide was composed of open-ended questions that were utilized to determine the abaca farming practices, cultural beliefs and problems, challenges and coping mechanisms of the *Aklanon-Bukidnon* abaca farmers.

Observation notes were divided into two parts; Descriptive Notes and Reflective notes.

**4. Results and Findings**

The results of the study on abaca farming practices focus on production, processing, marketing, cultural beliefs, problems and coping of indigenous people.

***4.1 Production***

During production, Indigenous abaca farmers used *sanduko* (jungle bolo) for grass clearing and *bara* (digging bar) for tilling the land.

Then these farmers cut the grass to clean the land and burn the grass to nourish the soil. In preparing the plant they make sure that the sucker is dry to avoid spoilage. Using a digging bar, they make a hole with a distance of 2-3 meters and put the sucker in the hole. To maintain the plant's health, the abaca farmers clear the grass around the plant in order to flourish.

***4.2 Processing***

Farmers use the tumbling method by cutting the stalk using the *sanduko* (jungle bolo). Moreover, a *sanggot* (curved knife) can be used in *the topping method and a kiligyan* (stripper)to sharpen and make this process spontaneous. Farmers make sure that everything was in place and the tools were ready and complete in order not to waste their time and effort. They also build a *payag-payag* (small hut) that has a stripper. The small hut is for storage of the detached bark in order to protect it from strong wind and rain. It was of great importance that farmers prepare themselves too before this phase, thus they have to take care of their health to avoid any illness.

Before the extraction process, the topping method or *pagpananggot* is done. In this method, the farmer uses a sharp, curved knife *(sanggot)* fastened at the tip of a long pole, to cut the leaves of the stalk and to minimize the damage to other plants Afterwards, the tumbling method or *pagtubong* is done by cutting off the plant with the use of a sharp bolo. After that, *baeobo* or tuxying method is employed by separating the leaf sheets building up the pseudo stem and then separating the outer sheath layer from the inner leaf sheath layer. Then, the extraction of fiber commonly known as *pagkigi* is done. The most common method of abaca fiber extraction in the Aklanon – Bukidnon's place was hand stripping.

Drying the fiber that comes out during the extraction process. Drying under the sun usually takes 2 to 3 days. On the other hand, covered/sheltered drying runs for a week or 2. After the fibers were dried, farmers bundle the abaca according to the capability of the farmer to carry them on his/her shoulder for hauling or transporting.

Bundling usually starts as *kinupang* (small fibers) which were bundled using a *piti* (Aklanon-Bukidnon word for rope). These small bundles are bundled into a *linabag* (the standard size of abaca fiber that can be sold). After that, the farmers put them altogether to establish a bigger bundle called *bultuhan* that weighs 40 to 50 kilos. Afterwards, the fibers are laid down and arranged in such a way that all their butt ends are in the same position across the 2 to 3 ropes. Once they are laid down across the ropes, the farmer will fold them until the desired size of the bundle is met. When the bundle is done, they store it in a cool and dry place.

***4.3 Marketing***

The farmers use *pagkoeo* when carrying the *"linabag"* (abaca fiber). *Pagkoeo* uses long abaca twines to hold the bundled abaca fiber which will be on the forehead of the farmer. The farmers meet with the *komprador* or assembler for the selling of their abaca fiber. The *komprador* usually brings a *romana* (a hanging weighing scale) which is used to measure the weight of their abaca fiber.

After the transaction, the farmers transport their *linabag* (abaca fiber) using a motorcycle. In the case of the farmer who has difficulty transporting the *linabag* due to the difficult road accessibility, the *komprador* (assembler) would go to an assembly place when the farmers were ready to sell their fibers. The persons involved in Abaca Marketing were Farmers, *Komprador* (Assembler), *Alsada* (Assembler-Shipper), Middle-man and Manufacturers.

The abaca farmers were responsible for the production, processing and marketing of the abaca fiber to the traders. As to the *Komprador,* these are the people who are responsible for buying the abaca fiber from the farmers using the *romana* (hanging weighing scale). Then the *Alsada* (assemble–shipper) buys the abaca from the assembler using his *baskula* (heavy duty weighing scale) and ships it to a Middle – man in other provinces. While the middle–man buys the abaca fiber from the assembler–shipper, he sets the price of abaca fiber according to class. The middle – man is usually accompanied by PhilFida (Philippine Fiber Industry Development Authority) representative for the final grading classification of dried fibers in three classes: Class A for white fibers, Class B for yellow fibers, and Class C for fibers with black spots or speckles. And lastly, the manufacturer is also known as consumers

who are buying the abaca fibers from the middle – man. They are the ones who use abaca fibers to create products like money, sandals, bags, etc.

### *4.4 Cultural Beliefs in Abaca Farming by Indigenous People*

*Sonata sa Kataeonan* or Music in the forest is believed by some farmers for it is said to be a signal from the forest deities to either begin farming in that area or to warn the farmers that there is a calamity or disaster coming.

Grilling, stir frying and boiling fresh crabs that overflow the water in the pot is prohibited since it is believed that *engkantos* or forest deities were not pleased about it.
In addition, the belief is that when the *sapat nga pihakan mata (the cyclops)* appears during merry-making occasions, there will be a blessing or a curse that will come to those who have seen it.

Some farmers have a common belief that there is no standard rule in planting abaca. They just woke up to the system and they unconsciously do things in farming based on what they observe from their parents and grandparents.

Some of the *Aklanon-Bukidnon* were still practicing an animistic type of belief system. Their practices were *mahikaw* or offering pig or chicken and *pinais* (delicacy which is made from glutinous rice) to the spirit of the dead ancestors after harvest; g*adaga* or offering pig or chicken blood and *pinais* (delicacy which is made from glutinous rice) to the gods and goddess; and *puong* is offering of foods like sardines, fish, chicken or pig for the spirit.

### *4.5 Problems and Coping of Aklanon – Bukidnon Abaca Farmers*

The problems encountered by the abaca farmers were the distance of their homes to the field, the cheap price of *linabag*, the lack of suckers and the mode of transportation when marketing the abaca. It is a challenge for *Aklanon-Bukidnons* when farming during harsh weather conditions.

It was revealed that the coping mechanisms of *Aklanon – Bukidnon* abaca farmers are ways to address their problems such as building small huts that serve as their temporary shelter in order to bridge the distance between their homes and fields; the voluntary help of family members and relatives in working in the farm for free in order to lessen the expenses of the farmers; the willingness of the relatives and fellow farmers to give suckers when there is no available sucker for the farmer to plant; finding a dry place to hang their fiber when harsh conditions hit their place; and the fast recovery of the wet abaca fiber which fell on the river during the transport, as well as the creating of a new bamboo raft, in replacement to the one that was damaged, in order to bring and sell the fiber in the town proper.

The indigenous abaca farming practices and cultural beliefs of *Aklanon Bukidnon* have a strong presence in sustainable development, especially in the agricultural aspect of the town of Libacao, Aklan, Philippines. Their culture plays an important role in sharing their knowledge, practices and beliefs with future generations.

## 5. Conclusion

The younger the farmers are, the stronger they are to do the hard work because of their physical strength which enables them to perform different rigorous activities related to farming.

Abaca farming manual practices and methods of Philippines *Aklanon-Bukidnon* farmers have a moderate yet slow and constant pace which resulted in minimal production. The farmers had a very out of date production of abaca since they were too dependent on suckers. Based on immersion and observation of the researchers, farmers do not have ideas about abaca technology and no other ways to improve their production, thus they were not updated with the contemporary trends in abaca production and marketing. This leads to farmers' inadequate knowledge about vast production within a short time span.

Additionally, the system of trial and error could be a waste of time and resources. This was something that could greatly affect the abaca productivity. Technology enhances abaca farming. There was a compelling difference between various ways of fiber extraction. A hand stripper or manual processing used by *Aklanon-Bukidnon* farmers produces about 20kg of fiber bundles a day in comparison with 80-120 kg produced by the spindle stripping method. The introduction of utilizing innovations, ideas and technologies in abaca farming to aid the farmers in making productivity increase and ease their work should therefore be set in motion through policies and programs promoted by the government without harming their indigenous culture.

Culture affects farming. While this study unveiled the richness of *Aklanon-Bukidnon's* culture and resources, it bonded the community through experience and stories to tell. *Aklanon-Bukidnon* has unique historical and cultural beliefs that influence their goals, motivations, values, access to land, and resources, which, in turn, influence the way each group structures their farms and

envisions the future. Preservation of culture, beliefs and practices through documentation should therefore be initiated through policies and ordinances promulgated specifically for this purpose.

The impact of indigenous abaca farming on people, community and all is the acknowledgement of the reciprocated connections between forests and abaca fields as a cultural belief that was deep-rooted in the heart and mind of *Aklanon-Bukidnons*. This fosters sustainable forest management as manifest in their regard to customary laws concerning land ownership, embracing the upland cultivation practices pursuing soil and water conservation ethics, encouraging the abundant supply of wood and other renewable resources, and conservation of biodiversity.

The unfavorable problems and challenges have made farmers more aware of drawing up coping mechanisms that would help diminish the threats in farming. These coping mechanisms were mainly adopted by them which have already been consolidated in their farming practices. *Aklanon-Bukidnon* farmers were practically smart in how to manage situations that enabled them to cope. Despite their resiliency, the government should not be complacent because the term resiliency was overexposed, to the point that sometimes they do not look at the problems to find the solution. Therefore, urgency for concrete solutions to help *Aklanon-Bukidnon* farmers amidst their problems encountered instead of simply relying on their resiliency.

Through this study, farmers could establish and strengthen their farmers' organizations or cooperatives. *Aklanon-Bukidnon* abaca farmers should accept the adoption of Innovative farming methods. Conduct of seminar-trainings on livelihood for *Aklanon-Bukidnon Abaca* farmers in improving the quality of Abaca fiber and establishment of Abaca Handicraft Industry to their community is recommended so that they would become the manufacturers of their own raw materials and sell it both domestically and internationally. These could help the farmers to improve their socio-economic status and to upgrade their abaca farming practices in production, processing and marketing.

The research bridges the gap between the Indigenous farmers' concerns and gives them the importance of improving the quality of production and lowering the cost.

The study could serve as baseline information to help farmers in the preservation of their indigenous methods with respect to their cultural beliefs without compromising productivity. And this research can serve as a good source and reference material for further research on more comprehensive cultural preservation. Also, it enhances their understanding of abaca production in the province so that they can be used for future livelihood development and studies.

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