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THE INDIGENOUS PRACTICES, BELIEFS, AND RITUALS OF THE UNOY RICE FARMERS OF KALINGA, NORTHERN PHILIPPINES - AN ETHNOGRAPHIC RESEARCH

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INTRODUCTION:

The province of Kalinga is a land-lack province located at the central portion of the Cordillera Administrative Region, Philippines. It has eight municipalities divided into two political districts. The Municipality of Tanudan belongs to District 2. It is considered as a fifth class municipality located in the hinterland of the province inhabited by the indigenous peoples of Kalinga, the Itanudan. The municipality of Tanudan was then made up of only five barangays grouped according to ethno-linguistic clusters. These are Dacalan, Ga-ang, Lubo, Mangali, Taloctoc and Pangol. During the olden times, the people of Tanudan struggled for survival over harsh realities of their unexplored but kind environment. Though the lower portion of the municipality is accessible to land transportation it is just recent that the road was opened to Taloctoc and Mangali. The staple food of the people is rice. They produce the rice in their fields *(pappayaw*) or in the upland slash-and-burn *(uma).* The *uma* farming system has always been practiced by the people of Tanudan, but there is no proof of its real beginning. There are some ideas of how the *Uma* started in Tanudan, but these are purely hearsays for lack of corroborating evidence.

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The stories of the old folks have dubious sources and each story teller has his or her version which at the end favors his own barangay or sub-tribe. The beginning being dubious, the Uma is one of the farming systems that brings life and sustains life itself.

The *pappayaw* is the wet farmland as distinguish from the *uma* which is the upland rice farm. The ricefeilds and the kaingin are planted with Unoy or Oyak, depending on the crop season. Unoy is a collective name of the traditional rice varieties (TRV) usually planted in the rice-field or the swidden. *Unoy* is planted in the dry season (*dinagun*). The Unoy varieties planted in the kaingin are *tawaki, bangod, dumaligan* and *dulpog*. In the payaw, *dulpog* or *dumaligan* is planted. During the wet season, the fields are planted with *Oyak* or *lumpagan*.

There are two cropping seasons in upland Kalinga, *dagun* (dry) and *sawali* (wet) cropping seasons. Two crops of rice are grown in the *pappaywaw (rice paddy)*. The seeds of the first crop (*unoy*) are large-grained. These are planted in seed-bed early December (*kiyang or ukup*) together with some glutinous rice (*dekot*). The planting of rice seeds in the seed-bed is called *ben-ak*. These are then transplanted to the rice paddies in early January. The second crop is *oyak*, planted in June (*akal*), transplanted the next month and harvested in December.

PRACTICES OF UNOY PRODUCERS ON LAND PREPARATION

BAYBAY

Baybay is a land preparation practice with the use of animals especially the water buffalo. A number of water buffalo are tied on their noses with a rope. Usually a male water buffalo or an experienced female will lead the group and the one on the other end is a young water buffalo being trained. The farmer stay behind the water buffaloes holding the rope to control the movement and pace of the animals. Sometimes the farmer weeps the slow water buffalo to accelerate the movement. The soil is trampled until it is muddy. The field will rest for a week before it is trampled again. This is called *kaliwag*.

After the kaliwag, the rice field is levelled with the use of a palm tree trunk or a bamboo divided into manageable size. Others use lumber pulled by a water buffalo. This is called *lenas*.

DOSDOS

The farms in Tanudan are always drained with water to facilitate the composting of the rice stalk from the previous crop and to make the soil soft and humus. The practice of *dosdos*

requires men and women. They line themselves in the field with two small poles as support. They used their feet to stump the soil until it turned muddy. The rice stalks from the previous crop are push with the use of their feet to the ground. This will in turn serve as fertilizer when rotten.

In the olden days men and women would line side-by-side each other holding each other's shoulder. They move their feet alternately in rhythmic motion in the tune of a salidummay or other ethnic chants appropriate in the occasion. They trump with their bare foot the rice stalks and other weeds in the rice paddy to bury them below the ground.

The dosdos can be the start of courtship among the unmarried ones or a closer intimacy with one another.

Dalus de Pigol (Clearing the rice paddy)

Prior to the *dosdos*, the farmers will weed the rice dike (*dalus*) with the use of a bolo (*gaman*) or *landok* (small hoe).

The weeds uprooted from the small dike (*pigol*) or from the *taban* (a rice-field wall) are thrown into the *banong* (rice paddy) to rotten and decomposed into fertilizer.

After the dosdos and weeding of the dikes, the rice-field is left to rest for the weeds and rice stalk to decompose. At this stage the farmers can now put leaves of sunflower, coffee or rotten rice hull to be decomposed with the weeds. The water is maintained to a level that the materials thrown to the field will easily rotten. Continuous flooding of the field will prevent its hardening.

Incidental to land preparation is the preparation of the rice seed-bed. It can be a small rice paddy, a section of a larger rice paddy or it can be in a dry ground. The practice of planting the rice seeds in the dry-ground is called *ben-ak* and *pay-yutok* in the wet-land. The selected rice-seeds from the previous crop is called *ilik*. These are the seeds being planted in the seed-bed. The women are the guardians of the seeds. They are the ones who will select the best seeds from the previous crop and kept it in a safe place for the next cropping season. The selected rice seed still with the panicles and bundled are hang inside the granary or at the roof (batangan) of their house to prevent the rats from eating or by any menacing insects.

The rice seed-bed is where the rice seedlings (*penal*) will grow until it is transplanted to the rice paddy. In the rice seed-bed, the farmer will put a palm midrib at the middle and

surrounding of the seed-bed with a rotten crab. It is believed that the destructive insects will be attracted to the smell of the rotten crab and the rice seedlings are being spared. They also place scare crow on the seed bed to scare birds, rats and rodents from eating the rice seeds.

The second round of the *dosdos* is done after the materials in the field are decomposed. After the *dosdos*, the gathering of the remaining weeds (*sagawsaw*) follows to finally clean the rice field for transplanting (*osok*).

The rice paddy is finally levelled (*danap, lenas*) manually with a piece of bamboo-split or a beetle-nut trunk (*buwa*). That will be the final stage of the land preparation. The field is ready for planting.

The uprooting of the rice-seedlings is done the day before the transplanting. The seedlings are either carried in the *batawil/damus /langaya (big hand-woven basket carried on the head, it is usually made of rattan)* for women or the *pas-wit (two big baskets fixed on both ends of a bamboo pole and carried by the shoulder)* for men.

Unoy producers do not tie the rice seedlings because some seedlings might be broken, neither do theyr throw the seedlings on the rice paddy.

Their Beliefs

Unoy farmers believed that when a snake cut across their way to the farm, the farmer should return and discontinue, however he can visit other agricultural plantations (*ba-ang*) or his tree plantation (*imong*).

They also believed in the *idaw* (bird portent). There are specific sounds and movements of the *idaw* that signifies some prohibitions. It is believed that when one does not heed the signs from the *idaw,* he might experience illness or something bad will happen to his family. That's bad omen.

Other farmers will result to the reading of the chicken-bile. Early in the morning before starting to the farm, the head of the family will chose the healthiest of his chicken and butcher it. He would put it above the fireplace to remove the feathers at which he shall slice the chicken breast and read the chicken-bile. When it is favourable, he cooks it for the family and he will start to the farm. Otherwise he will postpone going to the farm and butcher another chicken for the chicken-bile reading.

They also believed in the sneeze (*bo-on*). When someone is about to start and one sneezes, the plan will be temporarily postpone. After a while the plan will post-through or continued. Those who do not heed are believed to meet accident or any untoward bad incident or event along the way.

Rites and Rituals

Before the start of the clearing an old woman or man or the family head will butcher a chicken to read the vile. When it is good the clearing will proceed, otherwise they will wait for a good time in the future. Forcing to proceed will make the harvest bad or rodents, locust and pest will destroy the rice plantation.

Before the day work will commence, an old woman or man will make the rituals (*sissiwa*) in the rice fields. Making chants that the farmers will be strong, that no illness for the family, that the harvest will be good or that the rice planted will grow robustly. The *sissiwa* is done early morning before the tillers arrive.

PRACTICES IN UNOY TRANSPLANTING (Osok)

The seedlings (*pe-nal*) are uprooted from the seed-bed in preparation for transplanting. Uprooting can be done through *pangu, tangdan* (daily wage) or *innabuyug*.

The seedlings are either carried by hand or hand-woven basket (*damus*) or *batawil* (two baskets mounted at both ends of a bamboo) to be distributed to the field.

The seedlings are planted with no definite distance neither is there a standard in the number of seedlings each hill. This kind of planting is called *winnagay*.

The planters are very verse in the distance of the seedlings and the number of seedlings to be planted each hill.

The planters usually work for each other a day and transfer to another field. This is *pappangu*, an egalitarian economic practice. Each member will work for the other and vice-versa. Transplanting can also be done by *pappangu, tangdan* or *innabuyug*. The practice however is not done only in fields but practically in all endeavours.

The farmers name their seasons with the farming activity. Land preparation is *ingkakawadi*. Harvesting season is *i-yo-osok* or *iyo-olag*. Clearing in the kaingin is *iyu-uma*.

The farmers also follow a distinctive pattern in planting rice in their farm. They follow a cycle based on the season and each month or period. They have an indigenous calendar that they

follow in all agricultural activities, which are named after climate, blossoming of trees or the season itself.

The indigenous names of the calendar are as follows:

INDIGENOUS NAMES	ENGLISH EQUIVA-LENT	DESCRIPTION	FARMING ACTIVITY
Ladaw/Loya	January	Loya "ground is muddy"	Seed-bed preparation and planting of rice seeds
Manaba/Ladaw	February	Upuk "warning oneself	Selection of swidden sites.
Gabgab/Adawoy	March	Kiyang "waters in rivers and creeks get low and one can walk across"	Cutting growth in swidden (*manguma*) and hunting.
Acal/Manaba	April	Blooming of the ladaw three	Debris in swidden permitted to dry, hunting and peace pact celebration.
Kitikiti/Adawoy	May	Kiy-kit "time for burning swiddens"	Burning of swidden, hunting and peace-pact celebration.
Walu/Acal	June	Panaba "time to plant swiddens"	Planting time for swiddens, harvest of unoy and preparation of sinawali.
Camaduyung/ Aladug	July	Adawoy "blooming of the adawoy tree"	Land preparation in the rice-field
Malu/Saldan	August	Acal "start of rainy season"	Weeding rice-field. Planting in the field.
Abucao/ Buybuyag	September	Mamagitong "tyhoon time"	Leisure before harvest and trading time.
Gabbok	October	Walu " time of hail"	Lugam in the swidden
Bisbis or banat/ Upuk	November	Pabokao "windy time"	Start of harvesting.
Kiyang	December	Kil-ing "harvest time"	Harvest completed.

There is no specific number of days in each month. The people count the months by the appearance of the moon in the west – the new moon. This is called *sa-al*. The next appearance of the moon in the west is the start of another month. The appearance of the moon in the east is called *sikut*.

There are some beliefs related to the moon. When moon is flank by a star, there will be someone who will die soon. When a crescent moon is flanked by a star near its lower tip in

an early evening, the death will be very soon, otherwise, the death will take some days to happen. When a full-moon is flanked by a star, a leader or *pangat* will die soon.

During a sikut, people avoid planting any fruit bearing tree, it will die. They do not also buy any animal, it will not grow robustly, it will be very thin. *Palanus* is not also held. The newly-wed will not become rich.

Their Beliefs

Before the *pangu* on transplanting, the owner of the rice field has to plant a minimum of five padug on noon time for observation if harmful animals will destroy them. If nothing happened on the *padug*, the *pangu* will push through the day after the observation but if something happened on the *padug* the pangu will be postponed. This is one of the ways that the farmers will know that destructive insects are still around the field.

During the planting, the owner of the rice field must not butcher a chicken because the pagoy (*palay*) might be blown by the wind. The chicken having wings will blow the *palay* away and there will be no harvest (*apit*).

Burning of dried weeds is also strongly prohibited while the planting is going on because the *pagoy* or *padug* might be totally destroyed by harmful animals or insects. The menacing effect of burning might be the ferocity of wild animals and insects in destroying the rice-fields.

After the *osok* or transplanting a *salukang* with *dekot* will be placed at the center of the rice-field as a food for the unseen beings or the spirits of the dead folks. Old folks always believed that they spirit of their dead are still around, hence they summon them to protect the plantations or the rice fields. It is not only a belief in rice production but to all activities the old Kalingas will do.

When everything is done in the field, the farmer will retire home to observe the *ngilin*. During the *ngilin* period which usually ran for a week, the farmer and his family will stay home and avoid going to places where bad spirits or *anito* are. The women may make clay pots (banga) or other activities at home while the men will be busy making shade from the anahaw leaves or making hats (ligis) or weaving baskets (laga). Others will make bolos and other farm implements like *gaman, landok, gipan, lokom* and others.

Rites and Rituals (sissiwa)

Battikang. A piece of bamboo or *runo* sliced on one end with a piece of wood as the opening lock or divider of the splitted end. It is planted-erect at the mid of the field. The *battikang* will ward-off harmful animals that will come to destroy the transplanted rice- seedlings.

Puldus. The *puldus* is made of *runo* leaves semi-eight knot folded forming a loop. The young leaves of the *runo* are preferred because it is still soft and pliant. The *puldus* is placed at the edge of the rice paddy (*banong*) to ward-off harmful animals and insects.

Salukang. It is made of a piece of bamboo sliced equally at one end forming as many splits as possible. Bamboo splits are interwoven with the split-end of the bamboo pole until an inverted cone-shape is formed.

Inside this inverted cone-shape an old woman or man will place glutinous rice (*inandela or inis-isna*), then chants. Usually the chants are prayers for good harvest, warding-off destructive insects and animals from the plantation and good health for the family.

HARVESTING (ANI)

Practices

The Unoy farmers use the *lakom, lokom* or *gipan* in harvesting the ripe Unoy. Like transplanting, harvesting can be done by tangdan, pangu or innabuyug. In Taloctoc, Tanudan, aside from tangdan, pangu and innabuyug, harvesting can be done by *to-ong*, where the rice-feiled owner butcher a big cow or water buffalo and invite all the harvesters in the community to harvest. Each one will be fed and each harvester will bring home slice of meat (*ilang/wating*) when they retire at the end of the day. The pieces of meat are being held together by a small sheet of bamboo or kawayan (*tolok*).

The size of a bundle is as big as a full-grown-man's three fingers held together. It is held together or bundled with the *danog* made of fine sheets of a wild bamboo – *anos*. The bundle in the kaingin is bigger. It is as big as a man's risk.

The rice harvester will stick to their lane until the end of the day. There is no swapping or interchanging of positions or destination or station. Changing station will decrease the harvest.

The harvest is usually gathered before noon or lunch break. One will gather all the bundled rice (*binotok*) by *iting*, *lakom* and arrange it by *dalan*. The one gathering the harvest must first take the first binotok with the sokag.

Measurement used by the Unoy farmers

There is a unique way for the indigenous people to count their harvest. It is herein presented. The base is the bundle or botok.

Indigenous Measurement	Description
Sin botok	1 half-grip size bundle
Sin iting	6 half-grip size bundle
Sin lakom	12 half-grip size bundle
Sin dalan	Limal-lakom (5 lakom) 60 half-grip size bundle
Nasok-odan	80 bundles
Puwak	5 dalan or 300 bundles
Sin uyun	10 dalan or 600 bundles
Nasap-awan	More than 10 dalan or 60,000 bundles

Their Beliefs

Manabaku (Smoking)

All harvesters are prohibited to smoke (*malabaku*) when they are harvesting. The harvesters lined themselves (*pa-lad*) and start in one side of the rice-field (*banong*). According to their belief, smoking while harvesting will make the rice easily consumed. The easy consumption of the palay will result to *inggi* or famine. The granary or the storing jar will easily be emptied like a smoke that easily disappears.

Pakuy/Bogga (Shouting)

Shouting (*pakuy*) is also strictly prohibited during harvest time. It is believed that shouting will frighten Kabunyan. Kabunyan will run away and will give little harvest.

No passer-by is allowed to walk the dike of the paddy being harvested or so near the rice paddy being harvested. The god of harvest might be frightened and will ran with the harvest.

Dangkas

Passing-by is also prohibited because if will frighten Kabunyan. It is believed that when Kabunyan leaves, the harvest will be limited to the ones already harvested when he is present, so when he leaves, he will not give anymore hence there will little harvest. They call this act as *dangkas*.

Their Rites and Rituals

Puldus

Early in the morning that day the harvest is scheduled the *mampangu* or an old folk will go ahead to the rice fields to put the *puldus* on the edges of the rice paddy (payaw).

The ritual is done reciting or chanting such as the one that follows:

Sokag

After the putting of the puldus, the mampangu or owner of the rice fields will gather a bundle of rice. He will tie this bundle to the *sokeg.*

The *sokag* is made of a *puldus*. Peelings of the beetle-nut wrapped with the mint leaves (*lawod*) and tied to the *puldus* with *nito,* composed the *sokeg* or *sokag*. The sokag is tied by the mampangu or an old woman to the binotok that was earlier harvested or in the *binotok* of that which was harvested and gathered (*upbun*) in the morning.

During the harvesting season the mampangu will do the tagidonoy, a ritual that will make the harvest last long.

Tagidonoy

The *tagidonoy* is done by putting a *puldus* in the bakka (coconut shell)at the top of the cooking stove before someone starts to cook. There are chants done praying to Kabunyan that the harvest will last long. Usually, the cooking stove is made of three stones mounted in equi-distance to each other forming a tripod. The earthen jar or any cooking material is place on top.

Drying Practices of the Unoy

Aladoy/Aloy/Aradoy/Sadoy

Drying is done by hanging the bundled rice to the *aladoy*, *alloy, sadoy* or *aroy*. It is however popularly known as *aladoy*.

The *aladoy* is made of wooden round-post (*adili*), planted firmly on the ground. Small bamboo poles, the size of a man's risk are tied to the wooden-post horizontally creating a ladder with an approximate distance of 6 inches. The bamboo poles are tied to the wooden-post with a fine bamboo slit (*siklat*) from the *anos*. An *anos* is a bamboo specie grown in the wilderness. Bundles of rice are hanged to the horizontally mounted bamboo-poles. It will be displayed until the rice and the panicles are dried.

The *aladoy* can also be done at the side of the granary (*gibagib*) during rainy season.

Bilag

Others will dry their harvest on the ground. They spread the bundles on a dried ground during sunny day until dried.

Their Beliefs

Ugas

When drying the *unoy*, it may be the aloy or spreading on the ground, the rice-handler must be extra-careful to avoid falling rice grains. Accordingly, so many fallen rice grains (*ugas*) will anger Kabunyan and will retrieved the harvest or the harvest will fly away. Old folks will always pick the fallen rice seeds so as not to invite the ire of Kabunyan or the god of harvest.

Puldus

The puldus is again tied on the aladoy/aroy preferably at the far left-side of the aladoy when someone is facing the aloy. The puldus will ward-off harmful animals and insects from the aloy especially rodents.

Practices, Beliefs, and Rituals in Storing the Unoy

Ponpon

The dried bundle of rice is first piled in a *ponpon*. *Ponpon* or *pinonpon* is a temporary storing for the dried bundles of rice before it is finally stored in the granary (alang). The purpose of the ponpon is to fully dry the rice especially the rice panicles (gam-ming). The farmers believed that the remaining moist in the rice-seeds will be absorbed by the fully dried panicles preventing rice-seed destruction when stored in the granary for a longer time. It will prolong the life of the rice-seed in the granary and prevent the breaking of the rice-grain (*muting*) when pound (bayu) for consumption and to prevent that stench smell when cook, including the discolouration of the grain.

Alang

The final resting place of the rice (*pagoy)* is the granary (*alang*). The alang is a square structure made of light materials available in the locality. The alang can be enclosed with bamboo walling (*bulidaw*) or wooden-slabs or planks (*dabbi*) and a roof made of cogon or GI sheets. The posts (*tukud*) are made of hard wooden round-post taken from the forest plantation (*imong*).

A granary that is walled with bamboo is *binulidaw* and one walled or enclosed with wooden slabs is *dinabbi*. When the roofing is GI sheet it is called *nilata*.

The harvest is stored in the granary (*alang)* by *lakom (12 bundles)* or two *iting*. It follows a circular progression from the outside towards the middle. When the first round is finished, the succeeding levels are placed on top until all the bundles are put in place. One round of the layered and stored rice is called *ulkinab*.

Their Beleifs

When getting the bundles of rice, it must be done carefully and slowly because they believed that by carefully and slowly getting the bundles, the rice stored will slowly be consumed and last longer.

The granary must always be closed when nothing is taken inside. It must be always closed so that the stored rice will not fly away.

Before pounding, the rice will again be dried under the sun in sunny day or in the *salpaan/ salbawan* (storage hang just above the earthen stove) during rainy days. If it is not fully and thoroughly dried it is very hard to remove the husk by pounding.

Incidentally it is timely and fit to present how the rice is being un-husk by the upland communities.

There are three stages in pounding (*mambayu*) rice. The first stage if *taltag*. *Taltag* is detaching the seeds from the panicles by pounding with a pestle in a dried cow or water buffalo hide spread on a hard ground. After the *taltag*, the rice is winnowed through the use of the winnowing tool (*lamnak, labnak or ligaw*). The *lamnak* is a hand woven winnowing tool made from bamboo slits. It is made like a design of a winnowing pan. It may either be oblong or square in shape.

The second stage is the *pigwa*. The winnowed rice is pound on a wooden mortal with the wooden pestle. It is also winnowed. At his stage there are few un-husk seeds. The final stage is called *dog-as*. The grains are pounded again to completely remove the rice-husk. It is again winnowed to remove completely the rice-brand and the broken rice-grains (*muting*). The clean rice-grain is carried through the *damus* or *langaya* and finally store in the storing jar.

The *muting* is gathered and use as feeds to the chickens or cooked as pig-meal including the fine rice-brand (*dugi*).

The three stages are meticulously followed to minimize rice-grains being broken.

The rice-grains (*binayu*) are stored in a big jar (*boboggasan*) for family consumption. The rice storage jar sits on a sokag. It is also believed that when scooping grains for cooking, it must be done slowly and cautiously. It should not be hastily done because the rice might run away (*pumalsot*) and empty the jar. After scooping enough rice, they flatten the top of the stored rice and place firmly the cover.

Their Rites and Rituals

The *sokag* is placed on the bundles of rice that were first laid on the granary. A ritual is done so that the stored rice will last long until the next harvest. It is also prayed during the ritual that whenever the bundles will come out of the granary it will be for family consumption, for festivities and for barter or to be sold to buy property or work animal (*polak*). Because when one has many properties or work animals like carabaos, he is considered *baknang*.

After the rice bundles are all stored, the owner will close the door and place a *puldus* outside the door. It means that the storing is over. The *puldus* is also placed on the door of the granary to prevent pest or harmful animals to come near the granary and destroy the stored rice.

Water Management Practices

Alak

The *alak* is the communal irrigation canal serving as passage of the water from a river (*daw-wang*), a creek (*wa-i*l) or spring (bubus).

The irrigation is maintained by the farmers. They clear the irrigation from growing weeds, trees, fallen branches and siltation alternatively. When the water that reaches their farm is small they will do the clearing of the irrigation by walking through the canals (*unud*). They cover holes and slippage with mud (*piyok*). The construction and maintenance of the irrigation canal is a cooperative responsibility of the farmers. Before the start of the land preparation, an elder announce to the whole community the clearing and repair of the canal. All farm owners in the farm area or location (*dapat*) drain by the irrigation must go. Everyone contributes a certain amount as agreed upon for the purchase of a pig. As others work on the canal, some individuals will prepare the food. Sometimes the farmers will just bring cooked-rice or rice and the viand will be prepared in the worksite or they may go on packed-lunch.

Dulit

To facilitate the flow of the water in each rice paddy, the famers construct *dulit*. The *dulit* is a small canal or water passage preferably on one side of the dike (*pigol*). This will be the passage way of the water from one rice paddy to another. The dulit controls the water in the rice paddy preventing overflowing or submersion of the rice plantation. Overflowing water will erode and destroy the rice dikes.It also serves as the draining system to hasten the ripening of the rice and hardening of the soil before harvesting making mobility easier.

Tabayung

The tabayung is also a traditional water management system use to facilitate the flow of the water over a creek or a brook or precipice.

It is made of a big bamboo with the nods removed or a beetle-nut trunk or a palm tree (*ubud*) with the soft potion inside removed or a tree trunk halve into two with a v-shape canal made at its softer middle portion. Soft trees are selected for easier work.

Gusingan

The *gusingan* is the passage way of the water from the irrigation canal to rice paddy or an opening on a rice dike from one paddy to another. It serves as the control gate or valve so that the water will be equally rationed. Stones are placed on the *gusingan* so that it will not widen and destroy the rice paddy.

In the *gusingan* is the *ballutok*. This serves many purposes, mainly as screen to siltation, leaves, twigs and other debris that are carried by the water. It also helps in regulating the water flow and prevents the *gusingan* from eroding.

IKS and Rituals

Sis-siwa ne penal. This is a ritual done by an old woman after the planting of the rice-seeds in the seed-bed and before the posting of bamboo splits to ward-off birds. It is chanted.

Kultud. This is performed before harvesting. It is usually done a day or two before the actual harvesting. Half-grip-size rice panicles is cut and bundled and left on the four corners of the rice pond. This serves as a warning to passers-by that the field is ready for harvesting and the necessary beliefs will be observed.

It is believed that this will ensure more harvest and that the harvest will last long.

Puldus/ Sissiwa ne Upbun. This is a ritual done before the harvested rice in bundles are gathered and arranged by dalan. It is done with small bone from a pig's foot (*tikling*) and a knotted *runo* leaf. The *puldus* is tied in the first bundle harvested.

Ngilin. This is done with a knotted runo shoots (like puldus) placed on all passage near the paddies to be harvested. This is a warning that people passing should not shout ambogga/mampakuy) for the goddess of harvested might be frightened and run away giving lesser harvest.

Sis-siwa ne boboggasan. This ritual is done before filling up the rice storage pot. It is done to make the content last long.

Ngilin ne polas. This ritual is done by cooking a small amount of newly husked rice in a small pot (*ammuwok*). Accordingly it will serve as an offering to "kabunian" for the "apit" or "polas" and for the new harvest not to create stomach trouble when eaten.

Sis-siwa ne tilin/utut. This is performed to counteract or drive away rats and bird. This is done in the late afternoon when no one is left in the Uma.

Gibus/Palanus. A ritual is done after all works in the fields are over. The ritual requires a chicken or pig and sugar wine (bayas) is done in the fields or in their house. It serves as thanksgiving to the gods and goddesses and "Kabunian" for the bountiful harvest and for self rejuvenation after the laborious work in the rice field.

The economic cycle of the people of the upland communities is tied their whole view of the farming activities and other seasonal endeavours. The people in the upland communities had their own calendar for the whole year which is their guide in the performance of certain activities. Each month of the calendar depicts particular characteristics of the season and the activity to be done. Most of the names given are connected closely or associated with a particular event or situation that happened routinely in the economic life cycle of the Kalinga upland community inhabitants. In their part that reflects how close and intimidate the inhabitants with Mother Nature showcasing and environment dynamics.

Crop Productivity

One key-informant interviewed (an elder) divulged that a rice pond or paddy with an estimated area of 100 m2 planted with traditional rice variety in 1 year can have maximum yields of 10 "uyun" or 100 "dalan". One "dalan" when pounded it is approximately equivalent to 1 can of rice or a rough equivalent of 15 kgs. One can of rice is worth

Php300.00 in the community. Another informant said that with the same size of rice pond today farmers barely harvest 7 to 8 “dalan”.

Seemingly one of the factors affecting the yielding capacity is the shortage of water as the irrigation sources are drying up; irrigation canal are not well maintained causing slippage; cultivators and owners of the payaw migrate to centers in search for greener pasture; and, the conversion of some rice-fields into vegetables farms.

The older informants interviewed mentioned that before, many farmer(93%) are engage in planting the traditional rice variety but the number decreased (65.6%) so much because they want the new variety which is less time-consuming and with use of inorganic fertilizers.

Other factor that has an effect in the production of rice is the changing weather and climate observed by the other key informants. Weather has been recognized as one of the major constraints in crop production at least in the country. Agricultural scientists as well as farmers in the country are especially concerned about the changing climate, knowing that in the tropics the crop yield potential is lower as compared to temperate countries. The introduction of new-rice varieties known in the locality as bi-it enticed farmers to change variety and set aside the TRVs. During the conduct of the study it was observed that the areas formerly cultivated and planted with TRVs are now with vegetables and other crops. Some are indeed abandoned with the stone-walls crumbling down, dikes deformed and cogon dominates the landscape which was once a bursting source of life-the rice. Carabaos (water buffalo) and cows dotted that once beautiful panoramic view of the greenery and sparkling water that cascades through the canal and tunnels made of bamboo and palm tree trunks.

CONCLUSION

Based from the findings, the following conclusions were drawn:

The entry of mechanized farming has tremendously affected the production of traditional rice varieties in the study site. The people tend to use modern farm machineries like the diesel fuel drawn “kuliglig” that fast truck their work without due consideration to the fragile ”unoy and “oyak” eco-system. New rice varieties which can be harvested in shorter period are now dominating the production scene with few farmers still planting the TRVs.

Some areas are now converted into grazing land and others are virtually abandoned by the tillers and the owners as they both move to the center like Tabuk City in search for better

life. Fertilizer application is also claiming its bad effect to the fields. Though fertilizers application to the land was apparently needed for the fast growth of the crops with an expected higher yield, the occurrence was seen to be detrimental to the traditional rice-based ecosystem of the community. Some myopic farmers gamble higher yield with the wanton destruction of the eco-system which is very much attuned to the production of the tradition rice varieties

In its holistic view, these direction seem to lead, albeit slowly, on the total destruction of the ecosystem and the loss of the threatened traditional rice-based ecosystem which are irreversible when destroyed. Something should be done urgently to preserve somehow the rich heritage and the ingenuity and talents of the older generation etched in the rice-terraces they created and the manner they preserve the ecosystem that we even today has somehow have glimpse. When gone, we finally loss the last vestige of our real identity.

RECOMMENDATIONS

The following are the recommendations as reflected in the findings of the study:

- Generally, the cultural practices that are eco-friendly and site-adapted should be maintained;
- The farmers should control the number of seeds poured into the hole in a dry-land-seed-bed method to insure a higher germination level. This is also the way of saving seeds and minimizing seed wastage;
- Farmers should adopt the composting method in organic fertilizer production as espoused by the department of agriculture including the agency's pest control system (PCS). This method also help in the fight against climate change;
- Farmers and producers should adopt modern post harvest facilities on drying, storage, milling and packing to insure the quality of the products;
- The farmers should be taught crop rotation in-between rice planting seasons for additional income;
- The rituals that are not so required should be discouraged as prime practice or part of any farming activity. However, they should be preserved as living traditions of the indigenous people (IPs).

- The government should intervene to institutionalize organic farming among farmers. With the health consciousness of people around the world moving to a higher level, farmers should be encouraged and supported by the government to go organic.

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List of Key Informants

Name	Age	Name	Age
Dalina Sungngangao	75	Macaiba Kinao	67
Ayyug Bangngayon	72	B. Lambayong	50
Dummalnus Paganao	70	Bagiton Alleg	52
Amyao Malondon	71	Dangangao Awingan	60
Rupina Pumus-an	73	Rosita Goyao	75
Alberto Latawan	73	Dongnga Soga-ang	78
Romano Balonggay	70	Angay Wacas	67
Gal-lin-ik Cayumba	70	V. Dulagan	61
M. Dulawon	60	S. Angnganay	62
Dikagan Wandag	70	Antonio Gumabol	61
C. Pugao	57	G. Dinulong	51
B. Cayangao	56	C. Banna	54
Wagay Sallaya	68	Antonio Guisubon	51
Galima Tullis	69	Manalun Dalutag	50
Acosta Langngag	60	Buwaya Lumingis	51
Minganay Sulca	63	Gisol Masa-aw	49
Victor Cayangao	50	Piding Bayyacas	43
Mariano Ubod	60	Delfin Tallongon	48
Gabriel Banguiyac	52	Victoria Cawa	65

ABOUT THE AUTHOR

Edgar M. Naganag is a Doctor in Public Administration and an Assistant Professor at Kalinga-Apayao State College. He is one of the indigenous peoples of the Cordillera being a member of the Kalinga tribe and sub-tribe of Tanudan. He has written and presented papers on culture, rites and rituals of the people of Tanudan, Kalinga. He has also conducted researches on indigenous ways of forest preservation and conservation and on Gender Empowerment of indigenous women.