

## **BIBLIOGRAPHY**

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## **ABSTRACT**

The study was conducted at Bunagan, Daklan, Bokod, Benguet. It aimed to know the indigenous farming practices of farmers in Daklan, Bokod. Specifically, it aimed to (1) determine the socio-demographic profile of the respondents; (2) identify existing farming practices of the farmers in the place; (3) determine the process involved in these practices; (4) discuss how the farmers learn their farming practices in their place; (5) describe the innovations in the farming practices today, and; produce a booklet on the farming practices of Daklan, Bokod.

The data were gathered through interview schedules with 15 farmer respondents and three key informant interviews on January – February 2012.

Based from the study, there were six existing indigenous rice farming practices documented – *memed-ag* (to germinate palay seed in a seedbed), *arasho* (plowing), *saloysoy* (harrowing), *tuned* (planting palay), *abol* (driving away maya birds), and *ani* (harvesting palay), and also, the rituals *ta-ang* and *tadja*. Though sometimes some of the rituals are not being performed, they still do even if these are not as gallant as before, as



long as they respect and believe in the ritual's value. There are two varieties of palay farmers use for planting - the *talon* and the *kintoman*, so in a year, they have two planting seasons.

All the respondents prefer actual application or demonstration and oral instruction or description in teaching the farming practices to their offspring whereas. On the other hand, the farming practices didn't have much changes or innovations. Farmers still follow the procedures done by the old folks. They just engaged in using better materials such as improved *arasho* and *saloysoy* which is a combination of metal and wood or pure metal and are still pulled by a carabao.

Based on the findings of the study, conclusions were (1) there are existing indigenous farming practices in Daklan, Bokod, (2) farmers observe two planting seasons in a year done every six months which involves different processes in farming, (3) farming practices are learned through observation, actual application and oral instruction and are taught the same way and, (3) parts of farming practices may change over time according to convenience.

Thus it is recommended that, farmers should continue doing the indigenous farming practices and teach to their children so that the younger generation will realize the importance of the practices to the farming system of the place. Full documentation of the practices may be done including the rituals and beliefs employed by the elders and the younger generations so that it may be a basis for teaching and learning these practices. And finally, further studies may be conducted in the five sitios of Daklan, Bokod as a whole to check its differences and for documentation purposes.



## RESULTS AND DISCUSSION

### Profile of the Respondent

The oldest elder interviewed was Felomina Suayan, 84 years old, female, and has been a resident of sitio Bunagan, Daklan since birth. The second elder was Alfonso Delfin, aged 80, male, 59 years resident of the place. Both of them started working in the farm since they were 10 years old up to the present. The third elder was Peter Mencion, aged 71, male, and have also lived in the place since birth with 18 years in farming.

Table 1 shows the profile of the 15 respondents that were characterized according to age, sex, years of residency and years in farming.

The table indicates that four respondents belonged to ages 45-54, five belonged to 15- 24, three belonged to 25-34, while one each with age brackets 35-44, 55-64, and 65 and above. Moreover, there were eight males out of fifteen (15) respondents, the other seven were females.

Most of the respondents (5) have lived in Bunagan for 15-24 years followed by 25-34 years (4). Only one respondents each have been a resident of the place for 55-64 and 65 and above, respectively.

On the other hand most of the respondents (6) have been farming for 4-14 years followed by 15-25 and 26-36 years with four each. Only one had been farming for more than 31 years.

Most of them were born in the place, married and have a family and engaged in farming practices of the place. Moreover, the respondents started farming as young as ten years of



age. From the time of childhood they were brought to the farms by their parents and became their playground.

However, most of the respondents (13) learned the practice from their parents, seven (7) learned through observation from anyone who performs it and three (3) were through the help of friends.

Table 1. Profile of the Respondents

<b>CHARACTERISTICS</b>	<b>FREQUENCY (n=15)</b>
<b>Age</b>	
15-24	5
25-34	3
35-44	1
45-54	4
55-64	1
65 and above	1
<b>Total</b>	<b>15</b>
<b>Sex</b>	
Male	8
Female	7
<b>Total</b>	<b>15</b>
<b>Years of Residency</b>	
15-24	5
25-34	4
35-44	2
45-54	2
55 -64	1
65 and above	1
<b>Total</b>	<b>15</b>
<b>Years in Farming</b>	
4-14	6
15-25	4
26-36	4
37 and above	1
<b>Total</b>	<b>15</b>



### Existing Indigenous Rice Farming Practices

There were six indigenous rice farming practices and two rituals identified in the area.

Based from the study implemented, the existing indigenous farming practices were, *memed-ag* (to germinate palay seed in a seedbed), *arasho* (plowing), *saloysoy* (harrowing), *tuned* (planting palay), *abol* (driving away maya birds), and *ani* (harvesting palay), and also, the rituals *ta-ang* and *tadja*.

As observed by Estrella Aroco (respondent), though sometimes some of the rituals are not being performed anymore, the farmers still do it in a less gallant way, as long as they respect and believe the ritual's value.

On the other hand, two varieties of palays were used for planting - the *talon* and the *kintoman*. *Talon* is a variety of palay which is dirty white in color and is smaller in size not like the usual variety of rice while *kintoman* is red rice which has stout and shorter grains. In a year, the farmers have two planting seasons which is done every six months. When the farmers are done harvesting the *kintoman*, they plant the *talon*.

According to the key informants, during the rainy season, they plant the *talon* and harvest it in the dry season while *kintoman* is planted during the dry season and harvested in the rainy season.

### Process involved in the Indigenous Rice Farming practices

*Memed-ag*. This is the planting of palay seeds or the *bunubun* in a seedbed by the farmers. For *kintoman*, some farmers start *memed-ag* in the later part of December until the month of January while *memed-ag* starts from June to July for *talon*. Materials used are *bunubun*



(Plate 1), water and seedbed (Plate 2) which is made only for the *bunubun* or some farmer would also plant it if they have a lot of *ped-ag* (rice seedling).

*Bunubun* are first grown in a seedbed before they are planted. Farmers soak it in water usually for 3-7 days or until it germinates (Plate 3 & 4).



Plate 1. *Bunubun* or palay seed being placed in a seedbed



Plate 2. A seedbed where *bunubun* are placed



Plate 3. Young *bunubun*



Plate 4. *Bunubun* that germinated

*Arasho/mengarasho*. *Arasho* (plowing) is a process where farmers use an *arasho* (Figure 5), plow, pulled by a carabao to till the soil. According to key informants, it is also the process of mixing the soil. This is done in the month of January to March, depending on the *ped-ag* (rice seedlings). The materials used are *arasho* (plow), *pako* (Plate 6), carabao (Plate 8).

In *arasho*, the farmer dries the rice paddy if it is watery by letting the water flow out of the paddy by making a *ketang*. A shovel is used to dig portion of the rice paddy (Plate 5) to let the water flow out the paddy. When it is dry, then it is time to plow (*man arasho*) the land. The *pako* is placed at the nape of the carabao (Plate 7). The carabao is then driven back and forth the rice paddy by the farmer until the soil is tilled. After the soil is tilled, the farmer fills the rice paddy with water and it is time to harrow (*saloysoy*).

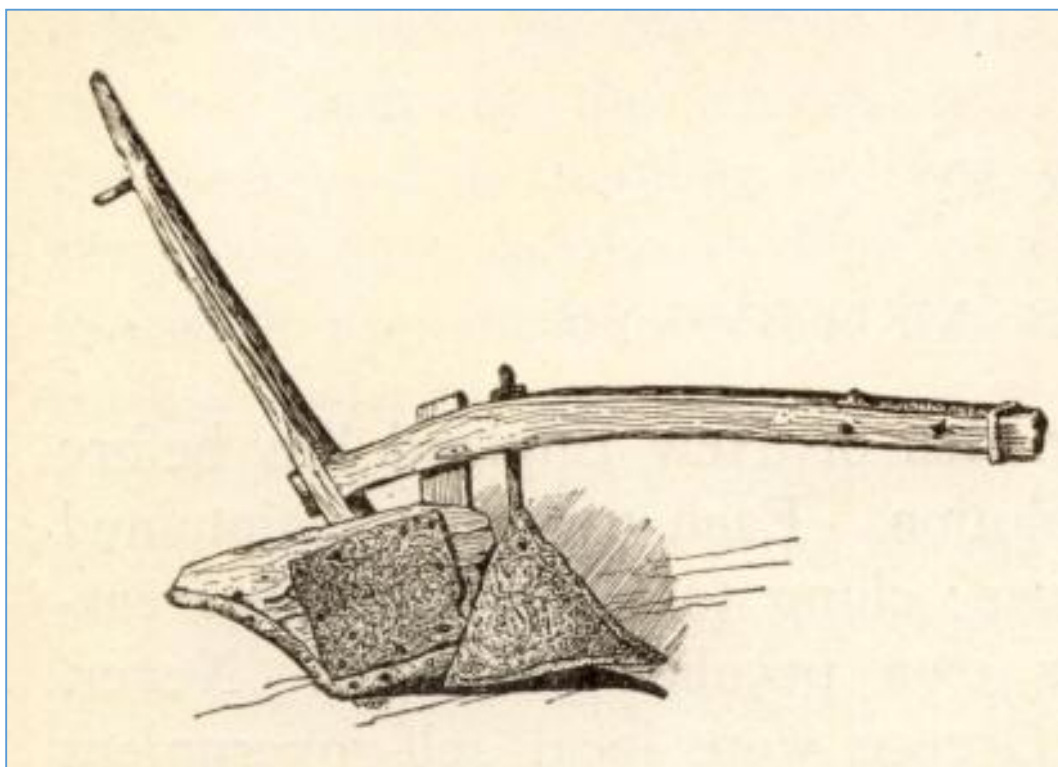


Figure 2. A drawing of wooden *arasho* used for tilling the soil in the rice paddy





Plate 5. A farmer making a *ketang*



Plate 6. *Pako*



Plate 7. A *pako* placed in a carabao's nape



Plate 8. A carabao in a rice paddy with the *pako* at its nape

*Saloysoy* (Harrowing). This is the process where farmers use a *saloysoy* (harrow) pulled by a carabao to soften the soil. Materials used for *saloysoy* include the *saloysoy* (Plate 9), *pako* (Plate 7) and Carabao ( Plate 8).

*Saloysoy* starts when the rice paddy is already watery, the farmers harrow it with the use of *saloysoy* (harrow) pulled by a carabao. In some cases they perform *saloysoy* twice before they plant. This is done by directing the carabao to go back and forth the rice paddy by the farmer until the soil is softened. After *saloysoy*, when the field is weedy, they perform *shalos* or *damon* (weeding) around the rice paddy so that it is clean before planting. Uprooting the weeds prevents pests from thriving.



Plate 9. A *saloysoy* made up of metal used for employing *saloysoy*

*Tuned*. Planting the *ped-ag* in the rice paddy. It is done in the months of March to April. Materials include the *ped-ag* (Plate 10).

Before planting the *ped-ag*, the farmer makes sure that the rice paddy is cleaned and without weeds. The germinated *bunubun* or *ped-ag* (Plate 10) is uprooted from the seed bed and planted on the paddies (Plate 11). Depending on the size and height of the seedling, farmer can plant two or three seedlings together.

After one or two months when weeds have grown in the paddies, farmers perform *shalos* and *kamas*. *Shalos* is to clean the surroundings of the rice paddies using sickle or is done manually depending on the weed, while *kamas* is to uproot weeds manually around the root of the palay to avoid pests such as rats and golden kuhol.



Plate 10. *Ped-ag* which is just harvested ready to be planted in a rice paddy



Plate 11. Planting of *ped-ag* on the rice paddy

*Abol* (driving away birds). In driving away the *beshing* (maya birds), farmers use scarecrows and/or *junjun*. The *junjun* may be composed of cellophanes, cans, old clothes attached to a string that farmers connect to a pole on one end and the other to their *abong* (hut or shelter). Farmers also use *palipal*, a bamboo similar to a wind vane that turns with the wind's motion, as their *abol*. It is done when the rice is ripening towards the months of May to June.

To set-up the *junjun*, the length of the farm is measured. A string is drawn from one end to another. One end is tied on a pole and the other is tied on the *abong*. The cellophanes, cans and old clothes are hung in distributed measurements on the string (Fig.3). For the scarecrows (Plate 12), a bamboo pole is positioned in the middle of the farm. A shorter pole is put across the pole to make a frame for hanging an old jacket or shirt.

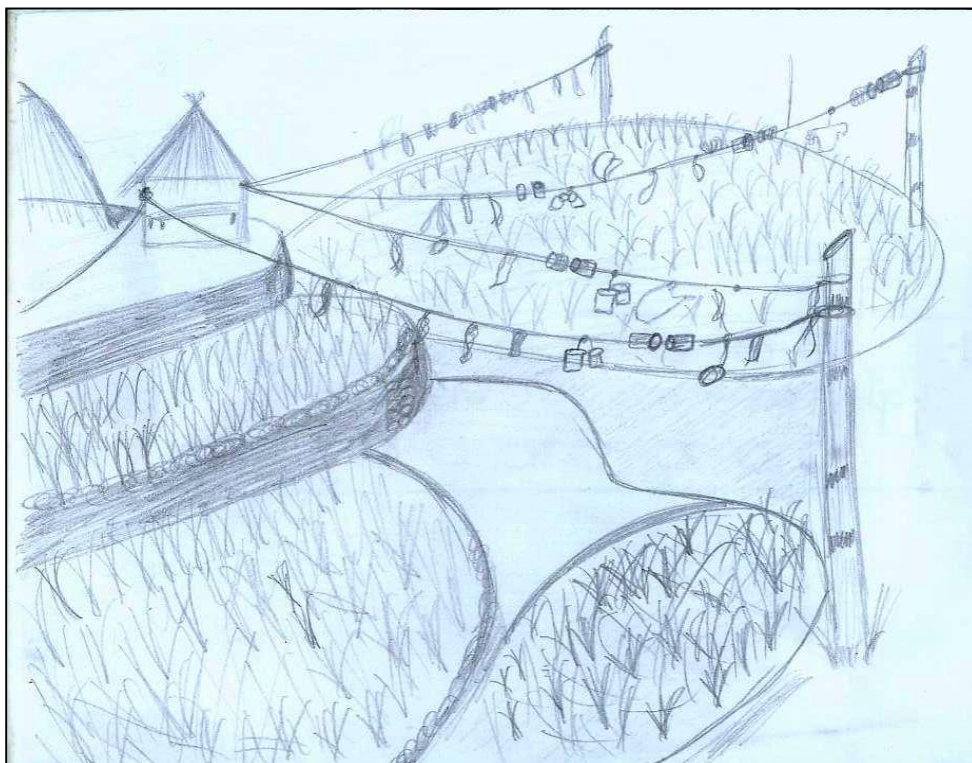


Figure 3. Drawing of *junjun* tied from the *abong* to the poles



Plate 12. Scarecrow placed in the rice farm



Plate 13. Newly made *palipal* made up of cogon grass and bamboo

On the other hand, the *palipal* (Plate 13) uses the following materials – bamboo pole, a thinner and shorter bamboo pole, plastic straw or wire and cans. First, the farmer makes a hole near the tip of the bamboo pole that is measured according to the width of the shorter bamboo pole. Then the shorter bamboo pole will be inserted in the hole. The bamboo hole will be secured by tying a wire or plastic straw around it. Cans will be hung on the opposite sides of the shorter bamboo pole using plastic straw.

Moreover, a propeller is made by cutting a bamboo segment into half, producing bamboo strips. Two strips are then formed into a cross which will be attached to the shorter bamboo pole using a long nail. Variations of the *palipal* can be made such as one that has two propellers and the can on each of the ends of the shorter bamboo pole. When the wind blows, the propellers will move and the cans will make a sound driving away *beshing* (maya birds).

*Ani*. This is the process of harvesting the palay with the use of *kamdang* or *dakem*, harvesting knife (Plate 14). It is done when the palay is ripe in the months of June to July.



Plate 14. A *dakem/kamdang* held by a farmer.



Plate 15. A farmer performing *ani*

There are two rituals performed under *ani* namely: *ta-ang* and *tadja*.

*Ta-ang* is done in the *abong* and is performed before employing *ani*. According to the key informant, they do this to have a bountiful harvest. The materials used are *tapuey* (rice wine), *tali-ti* (a grass use for tying the harvested palay), small amount of sand placed in a bowl or *kawil* (coconut shell) and two cups. According to the respondents *tapuey* is used to invite the *amed* (dead ancestors believed to be one of the gods) the farmers believed who guards their rice fields and will be guiding them in their *ani* that is why they place *tali-ti* and sand beside the wine as a symbol for respecting them and acknowledging their presence.

*Ta-ang* is performed first by placing the *tapuey* in the *abong* with the *tali-ti* (small bundle of harvested palay), sand and two cups of wine. They are grouped and placed on one side of the *abong*. Before the farmers go to the field, they will drink using one of the cup and when they are done harvesting or going home, they drink again using the other cup.



After the ritual, the farmer uses the *dakem* to harvest the palay. Hold the *dakem* which hand you are relaxed to use. The handle of the *dakem* is held by the palm and fingers while the blade is between the middle finger and the pointer finger or between the middle finger and the ring finger. The palay is cut one by one where farmer cuts the flag leaves from the rice panicle.

*Tadja*. This is done before eating the fist harvest of *kintoman*. This is performed in the house of the farmer. The farmer butchers a chicken so that there will be an abundant supply of rice from the farm. The materials used are chicken, liquor, two cups of water and two cups of two cups of coffee.



*Tadja* starts by setting the table and putting six pairs of plate with cooked *kintoman*. The cooked meat of chicken is served on the plates. While putting meat, the wine, cups of water and the cups of coffee are positioned on the opposite sides of the table. Each opposite must be composed of a cup of coffee, a cup of water and a cup of wine so that the cup of water is placed away from the coffee and wine (Fig. 3). Before eating the meal prepared, a prayer is said by the elder or the farmer. The farmer drinks or sips the wine and the water is thrown out either outside the house or in the sink while the coffee is either drink.

As said by Felomina Suayan (elder), both the wine and coffee are believed to be what the *amed* smells and the water is used to wash away illness and dirt that is why it is being placed away and thrown after saying the prayer.

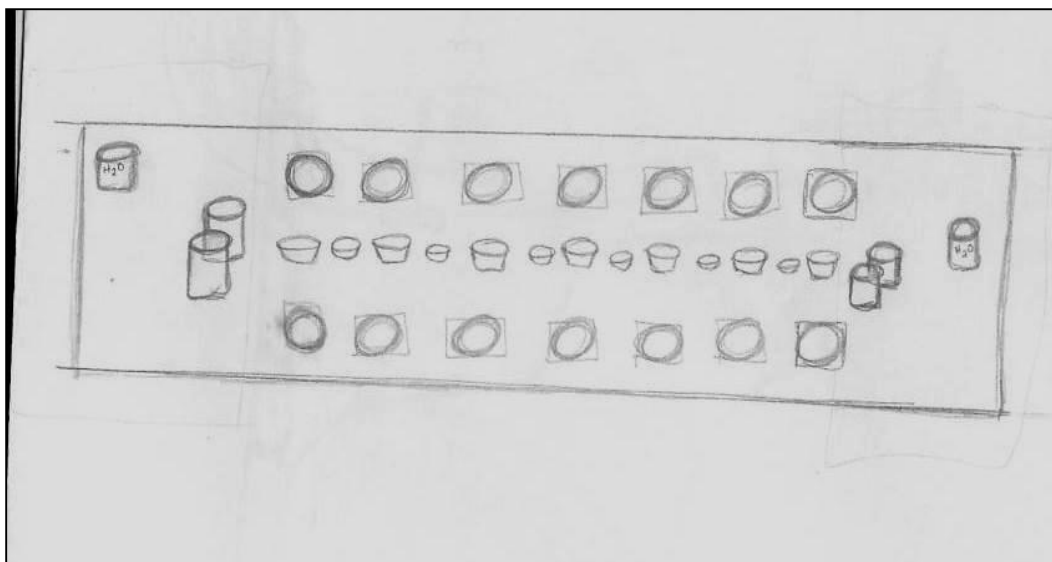


Figure 4. Drawing of table setting showing the arrangement of the plates and cups during *tadja*

Teaching and Learning the  
Indigenous Rice Farming Practices

Table 2 shows how the respondents teach and learn the indigenous rice farming practices in the place. All of the farmer respondents (15) identified that they both teach and learn best through actual application or demonstration of the farming practices wherein they are brought to the field by their parents and imitating them while their parent is saying what to do. Further, oral instruction or descriptions in teaching (12) were also identified by the respondents as the only other form of teaching. Observation (13) was chosen by the respondents as the next most possible way of learning the farming practices followed by oral instruction or description (7). Farmers instruct their children what to do and it is up to the children to follow instruction. Also they can learn more in observing other people doing the practice while they are in the rice farm for as long as children are interested to learn farmers are willing to teach them.

Table 2. Teaching and learning the indigenous rice farming practices

<b>CHARACTERISTICS</b>	<b>FREQUENCY (n=15)</b>
<b>Manner of teaching the farming practices*</b>	
<b>Actual application/demonstration</b>	15
<b>Oral instruction/description</b>	12
<b>Manner of learning the farming practices*</b>	
<b>Actual application/demonstration</b>	15
<b>Observation</b>	13
<b>Oral instruction/description</b>	7

\*Multiple responses



On the other hand, none identified written materials on either books or print outs as a form of either teaching or learning the indigenous rice farming practices. This affirms Prill's (1997) statement that IK is transmitted orally, or through imitation and demonstration. It is experiential rather than theoretical. It is learned through repetition, a defining characteristic of tradition even when new knowledge is added.

### Innovations in the Indigenous Rice Farming Practices

Table 3 shows that the farming procedures did not significantly change. According to the respondents they still follow the procedures done by the old folks. They just engaged in using better materials such as improved *arasho* and *saloysoy* which is a combination of metal and wood or pure metal and is still pulled by a carabao. They added that cows can be used as long as it is trained by the farmer to work in the field. Though there is an emergence of the rotor and *kuliglig* (a machine used to harrow and plow the soil) farmers still prefer to use *arasho* and *saloysoy* since the farms are mountainous. For them, it is easy to bring the *arasho* and *saloysoy* to the field, unlike the heavy *kuliglig* which they need to carry. Delfin (elder) said, "*Nu sikatedjo shay, mapteng ngo reshan e saloysoy ta na-engsaan*" (Harrow is better because we are used to it).

On the other hand, as observed by Jade Sison (respondent), some farmers do not plant *kintoman*, instead they consecutively plant *talon* so that the soil will have enough time to rest for the next planting season ensuing that the rice will grow abundantly. Moreover, others plant rice two times and after that they plant vegetables so that the soil will be fertilized.

In *tuned*, the farmers have not innovated with the use of a machine to plant palay, instead, they still do it with bare hands. With the introduction of new varieties of palay, some



farmers use broadcasting of rice or the *elik* (rice grains) because it is not time consuming. But there is still a big difference when doing the *tuned*. Miguel Puyao, (respondent), tried broadcasting (scattering palay seeds using the hand) but the plants grew was stunted. Further, since it is stunted then it has to be harvested through *kapas* (harvesting with the use of sickle). Also the plants are easily severed.

In *abol*, farmers still use the *junjun*. Also old clothes are still being tied on the bamboo pole.

Moreover, in *ani*, farmers still use the *dakem* or the *kamdang*. However, those who are not familiar with the use of *dakem*, use knife (small knife that can cut the rice panicle). On the other hand, *kapas*, according to the respondents, is a new way of harvesting palay using a *kumpay* (sickle), it is said that it was introduced by the lowlanders from Nueva Viscaya. *Kapas* is employed because of the emergence of new varieties of palay that are easy to *makepas* (cut with the use of sickle).

On the other hand, the rituals that go with the farming practices are now optional. Only farmers who want and can do it, perform the rituals. Changes include the use of rice wine (*apey*), small bundle of palay (*tali-ti*), and sand (for *ta-ang*). Further, they may choose not to butcher animals today for the ritual. *Tadja*, is applicable only for the *kintoman*, specifically when eating it for the first time in one season, if they perform this, they still butcher chicken.

This supports the statement of Cotthem (2007) that (IK) is dynamic wherein with the result of a continuous process of experimentation, innovation, and adaptation, it has the capacity to blend with knowledge based on science and technology, and should therefore



be considered complementary to scientific and technological efforts to solve problems in social and economic development.



## SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

### Summary

The study was conducted at Bunagan, Daklan, Bokod, Benguet. It aimed to know the indigenous farming practices of farmers in Daklan, Bokod. Specifically, it aimed to (1) determine the socio-demographic profile of the respondents; (2) identify existing farming practices of the farmers in the place; (3) determine the process involved in these practices; (4) discuss how the farmers learn their farming practices in their place; (5) describe the innovations in the farming practices today, and; produce a booklet on the farming practices of Daklan, Bokod.

The data were gathered through an interview schedule and key informant interview on January – February 2012.

The oldest elder interviewed was 84 years old, female, 84 years of residency in Daklan and started working in the field since she was 10 years old up to the present. The second elder was aged 80, male, 59 years resident of the place also same year been in farming while the other one was aged 71, male, 71 years resident and 18 years in farming as of present time.

Based on the study, five of the 15 respondents belonged to age bracket 15- 24, four respondents belonged to 45-54, three at the age 25-34, while one for the rest. There were eight males and the rest (7) were females. Most of them were born in the place where they engaged the farming practices of the place and the respondents started as young as ten years of age.

The existing indigenous farming practices documented were, *memed-ag* (to germinate palay seed in a seedbed), *arasho* (plowing), *saloysoy* (harrowing), *tuned*



(planting palay), *abol* (driving away maya birds), and *ani* (harvesting palay), and also, the rituals *ta-ang* and *tadja*. Though sometimes some of the rituals are not being performed, they still do even these are not as gallant as before, as long as they respect and believe in the ritual's value. There are two varieties of palay they use for planting - the *talon* and the *kintoman*, so in a year, they have two planting seasons.

All the respondents prefer actual application or demonstration and oral instruction or description in teaching the farming practices to their offspring whereas, with the combination of the three (application/demonstration, oral instruction/description and observation), the respondents acquire the practices. The elders, taught their children through the same methods - application or demonstration, oral instruction or description.

On the other hand, the farming practices didn't have much changes or innovations. They still follow the procedures done by the old folks. They just engaged in using better materials such as improved *arasho* and *saloysoy* which is a combination of metal and wood or pure metal and is still pulled by a carabao.

### Conclusions

Based on the findings of the study, the following conclusions were drawn:

1. There were existing indigenous rice farming practices in Daklan, Bokod.
2. Farmers observe two planting seasons in a year done every six months which involves different processes in farming.
3. Rice farming practices are learned through observation, actual application and oral instruction and are taught the same way.
4. Parts of the indigenous rice farming practices may change over time according to convenience.





## Recommendations

Based on the results of the study, the following recommendations were derived:

1. Farmers should continue doing the indigenous farming practices and teach to their children so that the younger generation will realize the importance of the practices to the farming system of the place.
2. Full documentation of the practices may be done including the rituals and beliefs employed by the elders and the younger generations so that it may be a basis for teaching and learning these practices.
3. Further studies may be conducted in the five sitios of Daklan, Bokod as a whole to check its differences and for documentation purposes.



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