

The mobility of the Hmong life style is striking. This is due to the exclusive practice of shifting agriculture throughout Northern Laos.

According to the system of shifting agriculture, the soil is exploited by the planting of successive crops, after which the cultivated area is abandoned for a suitable period of time in order to insure regeneration. So that the production remains stable, the farmer rotates his cultivation from one area to another. By the time the last section of land is left to lie fallow, the regeneration process is complete in the initial piece of land. However, in general, once suitable land within two hours walking distance of the village has been exploited, the Hmong simply change mountain, not expecting to return, moving their village and domestic animals to a virgin area.

The system of shifting agriculture is characterized in the following manner:

- very little working of the land.
- no usage of outside fertilization of the land. The crops planted thrive due to the natural elements in the soil and to those remaining from the ashes of vegetation burned while preparing the land for cultivation.
- no defense against crop diseases and parasites.

Shifting agriculture is based upon the many ray, more or less clear patches, depending upon the age of the ray, which are found in the tropical forest.

THE RAY AND AGRICULTURAL TECHNIQUES

The ray is a temporary, non-irrigated field, based on the clearing and then the burning of superfluous vegetation which lays bare and fertilizes the soil. Slash and burn agriculture is an extensive system which is founded on a technical tradition imposed by geographical imperatives. The techniques employed, the results obtained, the sum of conscious knowledge, suggests that the adaptation by the Hmong peasants to the particular environment of Northern Laos dates from the time of their arrival in the area.

The choice of the land for the ray usually begins just before the New Year which, each year, falls between the 10th of December and the 15th of January. The choice is, for each village, limited to the village territory. The village territory is less defined by a legal statute than by the maximal distance separating the residential and cultivation areas. In principle, the land belongs to the king of Laos and the farmer who works the land is a life-tenant. But the choice of the ray is also conditioned by other factors: one can not, for example, slash and burn a piece of land on a more than 25% grade or the land will be seriously eroded by the monsoon rains once it is denuded.

The family, after having chosen the land, clears the forest. In February and March, the trees are cut to within one meter of the ground. The work is individual; mutual aid is excluded by the fact that everyone clears the ray at the same time; no one has the time to help anyone else. The undergrowth is left to dry and then, in March and April, burned. The land is then cleared, the fertilizing ashes are spread out and, until seeding, weeding takes place to destroy harmful plants. The preparation of the ray lasts one month. Of course the preparation is easier and shorter the second and third year; it suffices to cut down the rice stubble and the corn straw, the plants and bushes, distribute them evenly so that they may be totally dry before they are burnt.

Each ray - unless it is close to the village - has a ray house. Among farmers may spend weeks there without returning to the village. Near the ray house, a pigsty, temporary granary and a stable for the horses grazing in the area.

After the first harvest and during the following dry season, no crops are planted. Before the next rainy season, seeding once again takes place, but with a greater quantity than the first year. A third year crop can, at times, be planted but the deminishment of the harvest usually obliges the farmer to let it lay fallow or to abandon it for good. A cultivation cycle lasts approximately fourteen or fifteen years. For example:

1st year : rice or corn
2nd year : rice or corn
3rd year : rice or corn (uncertain usually fallow or abandon)
14th to 15th year: fallow or abandon

The length of cultivation of a ray is highly variable. It is a function of the production - upon which depends the life of the community or the village - and the geographical situation. "Tropical soils," writes Professor Rene Dumont (1), "are usually poorer than those of the European and North American plains; except for the important exceptions of volcanic and alluvium soils. Tropical soils are above all exposed to warm water erosion which carries away the mineral components. Acidic, they are filled with humus which darkens the rivers, as in Scandinavia the combustion of organic matter takes place more quickly. Often evolution can lead to total destruction, as in the case of hardened laterite which has been dried by exposure (after decapping) to the alternation of dry and wet seasons. Erosion is another method of total destruction, favored by the denuding of the soil, provoked by bush fires or by repeated cultivation without precaution. The ray, despoiled of protecting forest, deteriorates rapidly with the formation of laterite. Once a layer of laterite close to the surface is formed, the soil loses all its value and can not be cultivated. Generally, the cultivation of a ray does not, among the Hmong, exceed three years of successive crops. The land, either left for good or to lie fallow, is reclaimed by the forest, savanna or pserido-steppe. In order to live, the Hmong peasant must find another corner of virgin forest to begin a new cultivation cycle. The search for land to farm essentially explains the mobility and great dispersion of the Hmong people. This instability leads to a relatively low level of living, justifying the Hmong proverb which says:

"To eat when you are hungry is to get fat
To run is to get thin
To settle is to become rich
To move is to become poor

However, in the last twenty years, one notes a generalised desire to change among the Hmong. The debillitating nature of slash and burn agriculture, the appearance of overpopulation in relation to the structure of needs (or values of usage) and to the system of production, the aspirations of young people for a better life, all pushed and continue to push them from their mountain tops. In Xieng Khouang, under Tiao Saykham and Touby Ly Fong, Hmong people have begun to try irrigated rice culture, the same experiment has appeared spontaneously in Sayaboury among families installed around the city. The Neo Lao Haksat, on their side, has brought about in the "liberated zones" important agrarian reforms permitting highland populations to improve rapidly and progressively their standard of living. We will examine this in more detail in the chapter on village economy and transition.

(1) Rene Dumont, L'Afrique est Mal Partie Collections Esprit "Frontieres ouvertes" Edit, Senil, Paris, 1962, Page 14-15.

I. Alimentary Crops

For the Hmong people, whose efforts remain oriented toward achieving self-sufficiency, elementary crops are extremely important. Alimentary equilibrium is a function of food harvests which are victims of unforeseeable misfortunes before which the peasants are helpless.

Since World War II, rice has supplanted corn as the basic foodstuff of the Hmong, corn remains, however, the principal eatable crop other than rice. It is used now only for chicken, pig and horse feed. This rapid evolution, generalised over Northern Laos, more than a little surprised M. Lafont who, commenting on Joel Martin Halpern's (1) book, wrote, "We are surprised to read that rice is the principle Hmong crop, while corn is only secondary. If the author had read Condominas (2), he will have learned that corn is the alimentary base of the Meo diet and if he had passed a few days in a Meo village, he would have seen the preponderant nourishment of the individual with small corn cakes," (1) This remark, which was true two decades ago, is no longer true today. All over the mountains, rice cakes have replaced corn cakes. This is striking when one travels in the area, and it confirms Joel M. Halpern's thesis.

In addition to these principal crops there are cultivated a great variety of vegetables and plants, eggplant, cucumbers, melons, onions, ginger, beans, soybeans, cabbage, parsley, endive, Chinese yams, taro, manioc, sugar cane, etc.... One must also add potatoes which were introduced in 1920 by the French administration and do quite well in the mountains. Gathered products constituted an alimentary complement: bamboo shoots, mushrooms and wild honey. Finally, fruit production (bananas, peaches, pears, papaya) plays an important role in the Hmong diet.

Alimentary cultivation is extremely diversified among the Hmong, who are known for their energy and assiduous work. If famine is appearing in areas particularly devastated by the war, it was unknown just ten years ago in the same areas. The Hmong put their honor into their strength and their work. Laziness for them is dishonorable. In order to be convinced of this one must only look at their crop calendar.

(1) J. M. Halpern, *Aspects of Village Life and Culture change in Laos* (Council on Economic & Cultural Affairs) 1958, page 143.

(2) *Ethnology of the French Union*, Edit. Leroi Gourhant Poirier. Vol II PUF Paris 1953, page 647.

Crop Calender

The lack of time and present difficulties would not permit us to make a detailed investigation of the Hmong crop calender. We have contented ourselves by taking the one established by Mr. Jacques Lemoine (1) for the Pha Hok region in Sayaboury province. We believe it can be applied to all Hmong villages in Northern Laos, give or take a few days according to the area.

1st month - The rice was harvested before the New Year (December). It must be beaten and transported to the house. The corn as well, the weeding of the poppy field is finished and the pumpkin harvest begins.

2nd month - All attention is focused on the sapping of the poppies. At home, the hatchets and hedge-bills are sharpened in preparation of clearing the ray.

3rd month - The opium harvest is over, the clearing of the forest is begin for the rice and corn rays. At home, the women are preparing hemp in order to weave skirts.

4th month - The end of the preparation of the ray is followed by a month of idleness, they wait for the cut wood to dry out. Most of the men use this low period to fashion utilitarian objects: troughs, buckets, etc... Hunting and trading take place. Some use the time to bring in the last basket fulls of corn.

5th month - Dry season. Burning of the ray and spreading of the ashes. With the first rains, the corn is planted. In the same ray, pumpkins, bananas, hemp and papaya trees are planted.

6th month - The rice is planted and in the same ray: eggplant, sugar cane, cucumbers, ginger, onions, chinese yams, taro, manioc, melons, soybeans, beans, etc...

7th month - The rains have begun. The corn is first weeded, then the rice. Tobacco is planted.

8th month - The opium ray are prepared: cutting of trees, and careful clearing of the land. In the same month the hemp is cut and the bark removed.

9th month - The plants are buried in the opium ray, then the early opium is planted. The corn begins to be harvested. At home, the Green Hmong (Hmoob Nisuab) women prepare indigo and decorate the skirt material with melted wax

10th month - Late opium is sown, part of it in the corn rays. With the opium endive cabbage and parsely are planted. The rains are more intermittant. On clear days the first rice is harvested.

(1) Bulletin of the French school of the Extreme Orient (BEFEO), Vol L., Fasc. 1, page 188 (1960)

(1) Jacques Lemoine, Op. Cit., page 56

11th month - The month is consecrated to the rice harvest and the harvest of all concomittant crops: melons, cucumbers, etc...

12th month - The opium is weeded. Pumpkins are harvested. The rice harvest is finished and, at the house, the women sew and embroider in preparation for the New Year.

The work schedule for the Hmong would suggest that disguised unemployment, which so many specialists are concerned with in under-developed countries, is a relatively rare phenomenon in these mountains. However, the nature of the land, the atmospheric conditions, often very instable, and the archaic cultivation techniques have not always permitted the farmers to receive all the benefits of their hard work. The study of the two main crops, corn and rice, will show this in greater detail.

A. CORN

The old Hmong of Laos tell that, when their ancestors left southern China, they took with them mainly cucumber, pumpkin, peach and corn seed. Corn was undoubtedly the most important grain, this was because of two main reasons:

1 - Mountainous regions, which were inaccessible to the Hmong immigrants, were unadaptable to irrigated rice cultivation. In addition, the newcomers were ignorant of the existence of dry rice culture. This hypothesis seems to be justified by the previous generalised consumption of corn and the subsequent cultivation of rice in the ray.

2 - In the country to which they moved, corn grew extremely well and produced a fine harvest. Without rice, corn is able to nourish a man adequately and, at the same time, it formed the basic diet of the domesticated animals which accompanied them on their long migration.

For these reasons, corn constituted the basic foodstuff, for a long period of time, of the Hmong people in North Laos and North Vietnam. The consumption of corn was so extended that it has been remarked upon by more than one foreigner who traveled in Indochina during the colonial era.

For the last twenty years, corn has given way to rice. However, its production remains relatively important by virtue of its importance in pig and poultry diets.

Corn planting time takes place in April and May. It is rarely planted in a newly cleared ray, but most often after the rice has drawn most of the minerals from the land. In one hand one holds the hoe, in the other the corn seed; one digs a hole from 6 to 10cm deep in the black ashed soil, drops in 5 to 6 seeds and covers the hole with the back of the hoe. The distance between two holes being one meter, one may dig 9,500 to 10,000 holes per ray hectare (approximately 25 to 40,000 corn stalks.) (1)

(1) Chao Ly. Initiation and Agriculture in Laos E.S.A.P. (Toulouse) 1969-70 page 71

Corn grows faster the more rain it receives. It quickly fights adventitious plants which try to smother it. A month after planting, careful weeding takes place, using a hoe, around each stalk. Two months later, another weeding the older a ray becomes, the more quickly and abundantly grow adventitious plants. Often a two or three year old ray needs three weedings prior to the harvest. Weeding is not only an absorbing but also a difficult job for the farmers.

The harvest consists of cutting off the corn husks and throwing them in the basket carried on the back. The corn is always stored in the husk, in a storehouse in big baskets. The corn is threshed, on a thresher, according to needs.

I - The area devoted to cultivation

The area of ray cultivation is extremely variable. It is a function of the available manpower, so that cultivation will naturally be much greater among a large family than among small families. Usually, a young couple, having 2 or 3 young children can plant only 0.5 to 1 hectare of corn per year, their efforts being divided among several different crops, mainly rice. It goes without saying that, when corn constituted the basic diet of the Hmong, the area cultivated was the double of what it is now: almost all efforts were concentrated on the corn crop which nourished men, domestic animals, pigs and poultry alike.

2 - Yield

The difference in the ray which could be of the 1st, 2nd or 3rd year, makes it very difficult to make a precise calculation. This is true for corn as for rice. However, the yield of a ray, contrary to appearances, is higher than the cultivated but imburnt fields of the plains. (1,300 Kg/Ha). At least for the first two years of cultivation. On a sampling of several ray, Mr. Jacques Lemoine discovered that there was, in the Pha Hok (Sayaboury) region, an average yield of 4,456Kg/Ha (1).

(1) Jacques Lemoine, Op. Cit., page 63

Our personal survey which was more modest covered three ray in the Long Cheng - Samthong area; it reported an average yield of 22 hundred weight per hectare. It also reveals that the yield of the ray follows a quickly falling curve beginning in the second year. At the third harvest it could descend to 8 or 7.5 hundred weight. At this time, if it hasn't already, the ray is abandoned to other crops.

It would be interesting, at this point, to study the net cost of one hectare of corn. It would shed much light on the rentability of work in the way.

3 - Net cost of one hectare of corn

Our survey, in 1969, on the ray belonging to Mr. & Mrs. Chong Khu in the Phak Khe region south of Xieng Khouang Ville, gave the following statistics:

Preparation of the ray (1 hec.)	=	42 workdays
Seeding	=	10 workdays
1st Weeding	=	20 workdays
2nd Weeding	=	12 workdays
Harvest	=	16 workdays
TOTAL	=	100 workdays

"The Hmong workday begins "with the first crow of the cock" and if the wife or young daughter of the house has not arisen, she has until "the 2nd and 3rd crow" to begin the day. This takes place at 4 or 5 o'clock in the morning. "(1) writes Mr. Lemoine who has spent years doing ethnological research in Hmong villages in Sayaboury province. However, the workday of a Hmong farmer varies according to the seasons and crop timing. The average day contains approximately 8 working hours. Important comment: In Hmong society, the woman works as hard as the man, if not more.

In the above example we see that one hectare of ray demanded of both Mr. and Mrs. Chong Khu, 50 workdays, 100 workdays in all. The preparation for a 1st year corn ray is relatively long (42 workdays) whereas an old rice ray will take only about 10 to 14 workdays; the clearing of virgin forest and chopping of trees explains this length of time.

The corn crop was 2,160 kilograms. The ray seems to be, at first glance, more profitable than a Lao field which has not been burnt (13 hundred weight per hectare). However, once the cost of the seed (80 kilos) and of transport are added on it comes out to appreciably less. Transport is over badly - kept roads, to non-frequented areas, over a long distance.

(1) Jacques Lemoine, Op. Cit., page 55.

The survey revealed that the great percentage of the harvest was transported by packhorse, the rest on the back of a man. Also, the geographic locations permitted only two round trips per day. If, on one trip, the horse were charged with 40 Kg. of corn and if Mr. Chong Khu and his wife each carried 20 Kg. in their back-baskets the amount of harvest brought to the village each trip would be:

$$40 \text{ Kg} + (20 \text{ Kg} \times 2) = 80 \text{ Kg.}$$

The amount brought in one day:

$$80 \text{ Kg.} \times 2 \text{ trips} = 160 \text{ Kg.}$$

In this case, the transport of the harvest would take:

$$\frac{2,160 \text{ Kg}}{160 \text{ Kg}} = 13 \frac{1}{2} \text{ days.}$$

The rentability of ray cultivation is diminished even more if the transport must take place on mans back. In this case it would take a month for Mr. and Mrs. Chong Khu to bring in their harvest.

This shows that the lack of communications has posed and will continue to pose a great obstacle to the economic development of mountainous regions of northern Laos.

RICE

In Laos, dry rice cultivation is a new and important inovation in the mode of production among the Hmong people. It was, twenty years ago, a true revolution which upset the agricultural life and habits of the Hmong. It seems that, following the acquisition of the seed from Lao and Khmou farmers, the Hmong threw themselves into large scale dry rice cultivation. This was unknown until a recent date to the Hmong of North Vietnam, more precisely the Viet-Bac.

Dry rice cultivation is characterised by the absence of submersion and irrigation of the cultivated land. The crops are entirely dependant on the rains without intervention on the part of the farmer to control the water.

It is often said that the Hmong "Work with fire and sew with a machete", that is they only practiced slash and burn agriculture. However, there are many indications that the Hmong ancestors did know how to proctice flooded rice culture. Witness to this is the existance of several words in their vocabulary concerning the practice of flooded rice cultivation. For example: the plow (rab voom), the harrow (rab pluaj), seedlings (cou yub). On the other hand, the Hmong do not have a specific word for "ray", which they call "daim teb" or "piece of land", whereas there does exist a word for the rice paddy ("liaj"). Also, the specific word for water buffalo (tus twm), the rice paddy animal par excellence suggests that the Hmong people were, once upon a time, a lowland, paddy people.

How the Hmong come to be in their present situation? Ecological conditions were as important as political, climatic and historical reasons. "The mountain people were not unaware", writes Mr. Pierre Gourou, "except for some MOIS (proto-indochinese) of the existence of flooded rice culture. It would have pleased them to have flooded paddies which would dependably produce a harvest. But, on one hand, land of this type is rarely available in the mountains; the needed levels, soil type and irrigation were only unusually united. On the other, the creation and upkeep of flooded paddies demand much work and the mountain folk, crippled by fever, are not capable of such great effort" (1)

Despite all sorts of difficulties, those Hmong who could cultivate flooded rice, did. Mr. Lemoine, citing Ivez de Beauclair, "A Miao tribe of South-east Kuoichow and its cultural configuration", Taipei 1960 writes, "the Koueicheou Miao (Hmong) whom she visited cultivated only sticky rice in terraced paddies irrigated by bamboo pipes." (1). In North Vietnam, Charles Robequain made the same observation in 1929. "Once they (the Hmong) had the possibility of establishing, away from other races, irrigated rice fields, they quickly lost their nomadic habits. This has already taken place in Tonkin, Dong Van, Pak Kha, Cha Pa, Hoang Si Fu, etc..." (2) Finally, in Xieng Khouang Province, the beginning of the century said the Hmong begin flooded rice culture. It is said that their efforts were rewarded by large, beautiful harvests. However, decimated and discouraged by tropical diseases (malaria, etc...), the Hmong farmers decided, without regret, to return to their mountains where the climate was healthy.

The unfavorable nature of the soil, the climatic uncertainty and disease explain why, previously, the Hmong considered rice a luxury food. It was used only on big occasions (holidays, visits, etc...), the base of the diet being corn. Rice, produced by Lao farmers, was usually bartered against opium which served as a standard of exchange. It was only around 1950 that slash and burn agriculture was used for rice and extended throughout all Hmong villages to become a generalized, daily food commodity in Northern Laos. Today, to eat corn is considered a symbol of misery and poverty.

Like their neighbors, the Khmou and the Lao, the Hmong cultivate a great variety of mountain rice from glutinous to non-glutinous rice. Non-glutinous rice is ordinarily used, whereas glutinous rice is served on holidays and above all on the New Year.

(1) Pierre Gourou, "Use of the soil in French Indochina", Paris, Hartmann (1940), Center for Study of Foreign Policy publications page 179.

The area of the ray and the sowing of the rice

The area of a rice ray is generally greater than that of corn. Like corn, it varies by function of the available work effort and also by the age of the ray, an age which facilitates the preparation of the ray and which determines the output of the ray. The average is between 0.7 and 1.5 hectares per farming family.

The sowing of the rice begins at the end of May and continues all during the month of June. The work is done by the couple, and, if possible, in a team: mobilising a large family or bringing together on one ray several married couples without children or with children of a young age. In this manner they pass from the ray of one to the ray of another. Following vaguely parallel lines, a man, a dibble in each hand, makes a hole in the soil approximately every 30 centimeters. A woman or a young girl, walking behind him, throws in about 10 grains with her right hand, holding the basket of seed in her left hand. With mutual aid, sowing takes only two or three days. It would easily take a couple a week or more. It takes three baskets of seed, 54 kilos, to sow a surface of 0.5 hectares.

2. Harvest and threshing

The harvest of the early rice begins in mid-September. Armed with a small, crescent shaped knife, one cuts the paddy far up the stem (1M50 average height). The operation is done in small kunches, chosen among the most ripe clusters which are then laid out to dry in front of the house or in the large smelting pot above the door. Part of this rice will be destined for sacrifices to the ancestors when "the new rice will be eaten". On this occasion a pig will be killed and parents, friends and relatives from the village are invited.

The real harvest begins only around the end of October and the beginning of November. This is the late rice harvest, the most important. The paddy is cut 20 or 30 centimeters from the ground with the help of a sickle. The clusters are put together and laid to dry on mats in a sunny area. Then they are stored.

The harvest over, flail-threshing takes place. The operation is well described by Mr. Lemoine who writes: "Near the storhouse and in the ray a large wooden frame is built with a bamboo screening as bottom. The clusters of rice are thrown in and young girls and women beat it with a flail a wooden stick about six feet-long. The grains fall through the screening to a mat below. Once a sufficient amount of grains fall through, the baskets are filled in preparation for winnowing. When there is only a small amount of grain a winnowing basket does the job but for the large winnowing operation, a ramp five or six meters high is built with tree trunks; a woman climbs to the top and empties a basketful of paddy slowly down the ramp. As it falls,

1) J. Lemoine, Op. Cit., page 64

2) Charles Robequain, The Thanh Hoa, Vol 1, page 237

the grains separate from the weeds and other twigs, carried further by the wind. A small girl, using a small broom, separates the two piles properly"(1)

At the end of each day, the beaten rice is carried to the house in 18 Kg. baskets carried by the men and women; and on packhorses. The rice is then put in a storhouse on stilts built near the home. The paddy will be husked as needed with the help of a large wooden pile. This is normally done by women and young girls.

What can one say about dry farming which depends uniquely upon ecological and atmospheric conditions? In other words, in these poor mountains of tormented topography and violent seasonal rains, does seash and burn agriculture allow the Hmong farmer to receive the maximum possible from this ungrateful region?

3. Yield

In dry culture, the rice yield varies distinctly with the regularity of rain if all and the age of the cultivated land. Mr. Lemoine has registered an average yield of 2,935 Kg - 600 Kg per hectare, by taking the average of 18 different ray over the entire area of cultivation of Pha Hok village (Sayaboury) for 1965 (2). Mr. Charles L. Pierson, F.A.O. expert to the Royal Lao Government (1967 - 70), and who was very interested in the hill tribesmen (1) gave us the following figures on rice yields for slash and burn agriculture:

1st year :	3000 Kg/ha.
2nd year:	1,500 Kg/ha.
3rd year:	600 Kg/ha.

This descending curve explains why the rice field is usually abandoned after the second harvest. It would be terrible indeed if the new field, cleared of the forest, did not produce more than the old. In order to ameliorate quickly the quantity and, above all, the quality of the diet - indispensable for a rise in efforts, the base of development--better yields and higher productivity are necessary. Only manual labour and virgin forest can now give this, until a national consciousness is born, to the Lao in general and the Hmong in particular. This undevelopment in all its formes is the result less of the negligence than the indifference of the leaders of the country, too occupied with their family or personal "affairs" or too occupied with grandiose receptions which go on and on and scandalize the people living in poverty and misery. The worst of all, is that all the leaders, without exception proclaim to "follow a social policy" "accelerate economic development" and "defend democracy"!(1)

(1) Mr. Pierson brought aid to the conception and realisation of the Hmong farm at Tha Ngone (Vientiane)

Left to themselves, the Hmong farmers continue to live in the eternal search for farmland, land which becomes more restricted with each generation and each politico-military event. The displacement of the population because of the war, leads hundreds, no, thousands to live in areas which are not very favorable ecologically. We will treat this in greater detail in the chapter: "Wartime Economy".

(1) Read: "Flux and Usage of non-national capital in Laos"
by Pheuiphanh NGACSYVA THN, Memoire de DES of the
Economic Sciences, Faculty of Lao and Economics,
University of Paris, (February - March 1971) page 46

4 - Net cost of one hectare of rice

In 1969, we surveyed a ray of rice belonging to Mr. & Mrs. Kai Heu. With the help of one son, the Kai Heu family cultivated approximately 1.5 hectares in Southern Xieng Khouang Province. According to Mr. Kai Heu, the harvest was 2,640 kilograms. The work was apportioned as follows:

Preparation (1 hectare)	48 workdays
Sowing	12 workdays
1st weeding	19 workdays
2nd weeding	12 workdays
Harvest	15 workdays
<hr/> TOTAL	<hr/> 106 workdays

The time allotted to rice is generally greater than that of corn. The main reason is that rice grows slower than corn and it is more likely to be strangled by weeds which grew extremely well during the Monsoons. This necessitates long and hard weedings, two for newly cleared and burnt fields, three and even four for second and third year cultivation. One must add the time used for threshing. The example given by Professor Rene Dumont for the delta region in North Vietnam may also be applied to the mountains of Northern Laos. "A fairly strong man can thresh 150 to 200 kilograms per day and up to 250 kilograms with easily threshable varieties. But this depends upon the help he receives from his wife or children who separate and stamp the rice"(1) At this rate at least 13 days are necessary to thresh a harvest of 1.5 hectares of dry rice in the first year of the ray. Then, the means of transport of the rice is the same as that of corn and can take from ten to twenty days depending upon the method of transport. (horse), extra help, etc. . .).

Having examined the two principle diet components among the Hmong people, let us look at other plants grown by them.

C. Other cultivated plants

Besides rice and corn, the Hmong cultivate a great variety of vegetables destined for family consumption. We will study the most important.

1. The cucumbers, which are well loved by the Hmong are cultivated with corn and above all, rice. Sown at the same time as the latter, they are harvested around October. One can distinguish in the same ray several kinds of cucumbers. Chinese cucumbers, bigger than those from France, they turn saffron yellow when ripening; "bitter cucumber" or "monordica charantia"; and long smooth cucumbers. Of the rustic type, Hmong cucumbers are usually insected with all parasitic diseases (Rot, cryptogamic diseases, insect attacks).

(1) R. Dumont, Rice Culture, Geographical, Maritime and Colonial Publications, Paris 1935, page 361

2. Gourdes and pumpkins

These two cucurbitaceous plants, are indigenous to Northern Laos, particularly to Xieng Khouang Province. They have a lime taste and are of satisfactory dimension. The gourds are generally grown in fenced in gardens (20 x 30 CM) close to the house, they grow up trees provided as support. The pumpkins are grown with the corn, in the ray. These varieties are prone to disease.

3. Cabbages and beans

The Hmong cultivate a variety of cabbage, from Petsai to cauliflower through white headed cabbage. Petsai are sown at the same time as the opium poppies, in the same ray. The white headed cabbage and the cauliflower are grown in the kitchen-gardens. These varieties of cabbage are for making soup and frying. Only is preserved. "First it is pickled into a sort of sauerkrant; then hung in the sun over bamboo poles. Once dry, it keeps for several months"(1)

Among the Hmong, one also finds a variety of beans, some of which grow very long pods. Bean broth without salt is highly esteemed by the Hmong, especially during the hot days in the ray; it is also used as a table drink.

Soybeans held a particular place in Hmong farming. They are soaked in water, put in a hand press and squeezed to obtain soy milk which serves as the base for cream. Soy cream or "tofou", of lesser quality than that produced by the Chinese and the Vietnamese, is widely consumed among the Hmong.

Finally, in the Hmong garden, one finds eggplant, onions, cherry tomatoes, various spices (pepper, parsley, etc...), and "Kau ywm" (calocasia?), large leafed plants, of which only the stalk is eaten.

4. Potatoes

The potatoe which is cultivated is not indigenous to Northern Laos. This early rose variety must have been introduced at the beginning of the century. It is considered a gathering product since it is usually just left in the ground to produce new tubers the next year. Ideally, the potatoes are planted at the end of February and harvested at the end of May. However, their great enemy, the red ant, eat most of the crop.

5. Fruit trees

The fruit found together the most often in Hmong villages are: bananas, papayas and peaches.

(1) J. Lemoine, Op. Cit., page 99

The harvested bananas are left to ripen in the middle of the paddy in the storehouse next to the house, in the heat.

The papaya is always harvested ripe and is considered a between meal delicacy by young and old. In effect the mountain papaya is very delicious. Since they grow in abundance, they are sometimes harvested green and fed to the pigs.

Of all the fruit, the peach has accompanied the Hmong on their migration from China to Thailand, passing by North Vietnam and Laos. It's characteristics are the following: large, well colored, white flesh, sweet, perfumed, a large brown seed which is easily detached quality: good when ripe (25 June) (1) This variety, called the "Hmong Peach" grows at an altitude between 1200 and 1500 meters and are often found in the family kitchen garden, surrounded by a fence.

Pineapples must be included in this survey as they grow fairly well in high altitudes. In Xieng Khouang Province apple trees are cultivated by the Hmong and the Phouan. They produce a sweet and perfumed fruits. There are wild apple trees which produce a small, sour fruit. The quality can be improved by grafting but problems of parasites and disease appear when an attempt is made to grow them on a large scale.

The development of these vegetable and fruit cultures runs up against either the distance to the urban centers or the lack of communications and the insecurity resulting from the present war. They are not exploited in a methodical method although they could provide an important exchange opportunity. The markets are available as a result of the rise in the standard of living.

II. INDUSTRIAL CULTURES

Even if the food cultures occupy a preponderant role in Hmong traditional economy, interest in industrial cultures is not lessened. Certain crops such as opium poppies constitute a substantial family income. We will study hemp, out of which Hmong cloth is made and opium poppies, a great source of revenue.

A. Hemp

Hemp is cultivated in the Northern Lao Provinces almost exclusively by the Hmong and only for their personal needs. This crop is not at the present time an item for trade. Hmong hemp reaches a height of approximately three meters but may reach as high as five. According to Mr. Pidance, it is called Cannabis Gigantea. It grows between the altitudes of 1,200 and 2,000 meters.

(1) Fridman, the Agricultural Future of the Tranninh, Thesis, (1954)
Vol I, page 52

1. Choice of land

Hemp is a demanding plant, it needs land relatively rich in humeues. The Hmong also cultivate it in alluvial soil, in basins, in old opium rays which are particularly fertile, in old village sites and in the family gardens where it is fertilized by manure.

2. Hemp farming

Hemp is sown in April, immediately following clearing and burning. However, most often Hemp culture follows that of opium once the land is considered fertile enough. Shoots appear seven or eight days after sowing two or more weeding take place. Once the plants have reached eight to ten centimeters in height, they are thinned into areas of 8 x 8 CMS.

Once flowering has taken place about three months later, the Hmong harvest the stalks. Thinking about following crops, a few stalks, serving as seed bearers are always left on the borders of the ray. The cut stalks are left lying on the field. Rain and dew initiate the natural process of steeping (retting). One must only turn them every two or three days; after a week, the work is done.

It is very difficult to make a survey of the yield because of cutbacks in cultivation on the one hand and insecurity (war) on the other. The present situation did not permit us to make any inquiries; we will simply quote figures given by Mr. Pidance in his study: "The Textiles of the Tranninh". He writes that the yield in dry stalks is from 3,000 to 3,500 Kgs per hectare (1)

The stripping is done manually, Hmong women get rid of the stalk by pulling on the fibers which are then attached end to end. This primitive method of preparation is long and tedious for the Hmong woman. The fiber is put into a skein and "softened" by passing it between a block and a board. The softened fiber is then put through the spinning wheel before being bleached by a wash based on ashes.

3. Net cost of one hectare of hemp

In 1905, Pidance evaluated the net cost of one hectare of hemp as follows:

Clearing of the wood	6,00	piasters
Labour	8,00	"
Sowing	2,00	"
Surveillance	2,00	"
Second dressing and thinning	8,00	"
Harvest	2,00	"

(1) Pidance, "The Textiles of the Tranninh" Economic Bulletin on Indochina, No. 51, New Series, 1906

Stripping	15,00 piasters
Preparation of the fiber	15,00 "
Softening of the fiber	4,00 "
Spinning	10,00 "
Bleaching	3,00 "
<u>TOTAL (1)</u>	<u>75,00 piasters</u>

4. Hemp cultivation and its present evolution

Twenty years ago, each Hmong family had its hemp field. All, or almost all, Hmong women wore skirts made of Hemp fibers. It was the same for most of the men. Today this fiber is hardly used except for skirts for Green and striped Hmong women. The white Hmong women long ago adopted pants. This change is explained by the over abundance of mosquitoes in the ray which attacked the Hmong woman's bare legs, by the influx of good quality, cheap foreign cloth, and by the long arduous job of fabricating cloth from hemp. "This pleated and embroidered skirt, the pride of the Hmong women, requires a long and arduous work effort" write Mr. Cresson and Mr. Jeannin. "All year, all their lives, it occupies Hmong women in the fields, on the roads, in the home. You can understand why it is not marketed even by the "Meo". (1)

In consequence, only the Green Hmong cultivate hemp and less and less - The gradual adoption of pants out of Japanese cloth among the women have set back the hemp production to the point where it is on the border of disappearing among the Hmong controlled by the Vientiane government. However, the Neo Lao Haksat have reinstated traditional weaving among the Hmong living in "liberated zones", wishing to assure them of "real economic independence, the basis for true political independence". One must ask oneself at this point, though, whether it would not be better to replace hemp - almost unprofitable - with is more profitable crop such as tea etc...

Having studied the cultivation of hemp what can be said about opium cultivation. What place does it occupy in the traditional Hmong society of today. How has it evolved and how well it evolve in Laos. We will answer these questions in the following section.

b. The opium poppy

The cultivation of the opium poppy plays and has played a very important role in the traditional economy of the Hmong people. It would be interesting to know how this poppy cultivation, foreign to Imperial China, was able to plant itself in this country and how it has become, for a long time, one of the principle financial resources of the Hmong all over Southeast Asia.

(1) Administrative Bulletin for Laos (1907-1908) gave the exchange rate as of 16 December 1906 as :
1 Piastre = 2,85 F.F.

1. Historical background

The poppy from which opium is extracted, originated in the Middle East. Before our era, it was already known by the Greeks. Around three hundred BC, Hippocrates prescribed it as a cure for certain illnesses. However, we owe the spreading of its usage above all to Arab doctors. Around the 18th century, the drug spread throughout the East Indies where its cultivation was organized by the all-powerful East India Company, for its own profit. Then, as the custom of smoking the drug became established, opiumania ravaged the rest of the Extreme Orient. Thus the Indian drug was introduced to China where the consumption became very high, much to the delight of the English company, if not to the Chinese.

Worried about the aggravation of the social situation, the Chinese authorities tried to ban the importation of the terrible drug. The closing of opium dens in China led Great Britain to declare two successive wars (1840 and 1856) in order to re-establish the commerce which became free in 1858. The treaty of Tientsin which put an end to the famous Opium War, stated that all foreign countries had the right to introduce opium into China. Thus, all efforts to eliminate the use of the drug, which caused serious incidents in China itself, were in vain. Now, certain Chinese leaders wished not to make the drug disappear but to line their pockets with the profits which were made by the merchants.

It appears that around this time the ancestors of the Hmong, pushed into the mountainous regions of Southern China by the Chinese wanting their land, began to practice opium poppy cultivation for the flourishing market. Since, they have specialised in its cultivation which had become for them a new source of revenue. However, the greatest profit went not to the producers but to the military and civilian administrators who got rich of the back of the Hmong peasants. This situation reproduced itself in North Vietnam and in Northern Laos, to the profit of local chiefs and lords who were of a truly feudal nature. The practice of opium poppy cultivation was transmitted from generation to generation, breaking through borders, to arrive in our times.

2. Cultivation and yield

Of all the crops planted by the Hmong, the opium poppy receives the most care and solicitude. It is an exacting plant and demands a particularly rich and well composed soil; it grows well only under certain conditions of humidity and sunlight; it gives a good yield only when it is properly treated. Also, through experience, the Hmong prefer calcareous mountains for its cultivation. The soil is perfect and the exposure more favorable.

(1) Cresson and R. Jeannin, "Meo Cloth"
Indochinese Institute for the Study of Man,
(1943- Vol VI), page 435 to 447

According to Mr. Fridman, the Hmong cultivate two types of papaver somniferum satigerum:

- One has a pale mauve plower, with large, as long pods, not very fleshy lining, the latex is very watery and not very conducive to coagulation, thus a small yield.

- The other variety, more widespread, has a flower the color of "wine lees." The capsule, small or average sized, quasispherical, has thick lining and give a latex which is thick and creamy, coagulates rapidly, gives a good yield.

The Hmong of Northern Laos sow the poppies at two different times of the year, giving two qualities of opium, early and late opium.

Early opium is sown at random, in July, in a corn ray once the corn stalks have reached maturity and the weeds have been pulled from a slightly upturned land. Three kilos of seed is necessary for one hectare. As the corn grow (1m50 to 2m50) it smothers all the plants which would harm the poppies; at the same time it serves as protection from the sun.

Germination lasts around 10 days. Twice, 15 days apart, the plants are thinned by eliminating the more delicate so that there is a 15 to 30 centimeter clearing around the foot of each stalk. In July, once the corn is harvested and the stalks cut down, the poppy plants are from 4 to 5 centimeters in height and strong enough to resist the strong monsoon rains. Flowering takes place in October and November, followed by the harvest which lasts into December.

However, early opium is not a generalised phenomenon, it is cultivated only to hold down the smokers or addicts. It is of inferior quality and only small spaces are devoted to it.

Late opium, the most important, is most often cultivated after a corn crop. From July - August, once the rains have prepared the soil, the corn stalks are cut and burned in the opium ray in small piles. The piles of ashes are suitably spread over the land which has been patiently hold over buried weeds. This working of the land and use of green fertilizer unfortunately only takes place with opium cultivation because it is so time consuming.

The opium is sown at the end of August into September. It is sown in the same fashion as early opium. The first weeding takes place two months after seeding before the plant reaches 20 centimeters in height. It is done with a hoe. Weeds are cleared regularly until flowering. The latex is harvested from January to March.

The incisions are made between 11:30 and 14:30 when the sun is at its zenith. The most commonly used instrument is a small curved and polished piece of wood at the end of which are stuck three parallel copper blades about 2 millimeters apart. The first day two incisions are made from top to bottom and side to side on the pod. In this manner a pod can be slit four to six times depending on its size. Due to the effect of first the sun and then the coolness of the evening, the latex flows, then coagulates on the outside of the pod. The drops are collected very early the next morning (0500h) with a small iron pallet. Once it is full, the contents are poured into the bottom of a cup. It is not until 0900h. that the harvest is finished; at this time everyone either sits in the ray house or before it to eat breakfast. Then the blades are sharpened, the pods slit and the harvest takes place once again the next day. The harvest will be slightly less than the first which is 350 to 400 grams because the latex is thick and rich in various alkaloids. Therefore, the harvest declines with the increase of incisions. However, the poppy plant continues to grow and provide new pods. The milking of the poppy can last more than a month.

An opium ray can vary greatly in size, depending upon the nature of the soil and its degree of exposure to sunlight. If it is small (0.180 hectare), the farmer usually has one or two more elsewhere. It seems the average size is 1/2 hectare. It is rare to find one which will reach one hectare.

It is not always easy to make a study of the yield of an opium crop. Such a survey usually comes up against the Hmong who will not permit it. Mr. Augier, ex-Custom and Tax Inspector for French Indochina puts the yield at 5 kilos/hectare. Mr. Marseille, ex-Agricultural Director, says that the yield, in Xieng Khouang Province, varies according to the year and the ray between 5 and 10 kilos/hectare. According to Mr. Boutin, former Administrator in Sam Neua, a crop, in Houa Phan province, during an exceptional year, will yield 10-18 kilos/hectare. Mr. Lemoine reports, in the Pha Hok (Sayaboury) region a yield of 5,700 kilos/hectare. A good ray in a good year will only yield from 7,600 - 11,400 kilos/hectare. The study of the yields bring us to evaluate opium production in Laos and to examine its commercialisation both inside and outside of the country.

3. Opium production and its commercialisation

Opium production in Laos has always been very difficult to estimate because of the great dispersion of the producers over an immense territory, an absence of a sufficient infrastructure and the permanence of war. These factors have always inhibited the surveyor who must also overcome the distrust of the producers who are under tremendous financial pressure. If the French Colonial Administration was negligent in making approximations, the Royal Lao Government is no better and usually is contented to refer to numbers devised by an unknown person on the production of opium.

For a long time, the Hmong, the Yao and several Phouan and Thai Deng have cultivated opium for personal use. In 1898 the French Colonial Administration, newly implanted in the country began to organize the Opium Administration which was governed by the Arrete of 7 Feb 1899. This law which, for 22 years, would rule all of Indochina in matters concerning opium, contained a special clause favoring the Yao and the Hmong, while forbidding grand and contraband. This privilege was reinforced by the Arrete of 3 Sept 1948 in which the French High Commissioner for Indochina accorded only to the Yao and the Hmong permission to grow opium. Once the French became involved in international discussions to repress the usage of opium, the Administration's purchasing of opium sharply declined, without stemming the production of the drug. The maintenance of surplus was insured by flew of contraband: Vientiane, Hanoi, Haiphong, Saigon, Phranom Penh and Bangkok provide to be important markets. Here are some figures which Mr. Fridman collected. They are not indisputable:

(1)	1935 - local production of opium	:	Approx	20 tons
	1942 - " "	:	"	25 tons
	1945 - " "	:	"	30 tons

One can see the rising curve in opium production which has accelerated since 1942. This abrupt rise in production can be explained by the fact that the Colonial Administration, during World War II, found itself cut off from funding and used

the sale of opium to increase its revenue. If one allows five tons to be consumed locally, anywhere from 15 to 25 tons were available for purchase per year.

Since the time of the effective Independence of the country (1954), the Lao government administration has not been able to control the production of opium which has been channeled into illicit traffic, protected at times by the most highly placed officials in the Kingdom.

But with the resurgence of hostilities and the participation of the Hmong in the war, opium cultivation has been profoundly disturbed. Since 1961, opium production in Northern Laos has dropped to its lowest level. The "Tran Ninh" province is no longer "opium producing country" contrary to what foreign journalists, who have not set foot in the region for ten years, prefer to write. These "Historians of Contemporary Events", uninterested in objectivity, are constantly looking for the spectacular - inventing it, if necessary - in order to rouse international public opinion. In 1969, we scoured the mountains of this area and found very few opium ray. A few years earlier, General Vang Pao asked the people to give up opium cultivation in order to devote themselves exclusively to food crops and livestock. However, a replacement crop has not yet been found. The war, insecurity and commercial difficulties (opium commerce is theoretically illegal in Laos) essentially explain the sudden drop in opium production in Laos.

For a long time, opium cultivation was a necessity for the montagnards of Northern Laos. It was not only a source of revenue. Known since antiquity for its curative virtues, opium was and remains a medical resource in many isolated regions of the countries." Because of its influence on the nervous system, opium (by ingestion or local application) - and above all morphine given intramuscularly is able to remarkably calm all sorts of pains, be they sharp and sudden (gastritis, appendicitis, liver and kidney colics, blood poisoning by lead, neuralgia, insomnia during acute inflammation etc...) Or persistant (ulcer, cancer etc... Being an analgesic and soporific, opium is a strong nerve sedative useful in mental alienation, delirium and diseases of the central nervous system (epilepsy eclampsia, chorea, etc...) It mitigates cardiac seizure... The good results obtained by using the drug (paregoric) in cases of diarrhea, enteritis and typhoid fever, are because of three effects: sedation of the pain, moderation of intestinal contractions and lessenings of secretion. (1)

The theraputic effects of opium make it so that the drug quickly surpasses personal consumption to be incorporated in local and international commerce. This commerce has gone and will go under different guises from legal traffic to contraband.

During the colonial era, buying and selling of opium was a monopoly run by the French Administration of Customs and Excise Taxes (arrete of 22 June 1903) The anual sales of the monopoly were the following:

Annual Sales of the Opium Monopoly

<u>YEAR</u>		<u>QUANTITY</u>
Until 1910	'	More than 110, 000 Kg.
in 1916	'	From 65, 000 to 75, 000 Kg.
in 1916-18	'	More than 115, 000 Kg.

(1) Gabriel Garnier, Lucienue Bezanger-Beauquesme, Germaine Debraux, Medical Resources of French Flora, Vigot-Freres Editions, Paris 1961, page 500

This increase was due to special conditions created by the war, the unprecedented prosperity of two exceptional rice harvests, a great rise in exports and the passage of approximately 50,000 Chinese workers (1) From the end of the war to 1930-31, the sales of the monopoly were stable between 60,000 and 70,000 Kgs. Even French Indochina felt the world economic crisis and there was a considerable drop in the consumption of monopoly opium. The figures fell to 28,458 Kg in 1934 and had still not risen to pre-1930 figures by 1938.

With the advent of World War II which cut Indochina off from the rest of the world, the monopoly quickly exhausted its stocks. The colonial administration was faced with economic and social problems. Social problems: opium was needed for the dens in Vientiane and above all those in Hanoi, Haiphong, Saigon and Phranom Penh (100,000 to 150,000 Vietnamese and Chinese addicts in 1936, Laos and Upper-North Vietnam not included) Economic problems: revenue was needed for the colonial budget, already cut off from large funds. So Northern Laos was called upon. The Monopoly, in Laos, made enormous purchases. Despite a rise in production, the price of opium rose in a dizzy spiral. Even their profits were enormous: 1 Kg of opium bought for 3,000 piasters in 1952-53 on the Xieng Khouang market bought, 7,500 piasters in Saigon. This was the course set for opium which would contaminate the entire social hierarchy, from Chinese and Vietnamese merchants, bureaucrats, high and low to high dignitaries in the Kingdom of Laos. A large percentage of the crop went to the Viet Minh who paid a higher price than the Lao Government. The Viet Minh then sold it on the large Southeast Asian Market, receiving substantial profits with which they bought weapons.

In 1960, opium, sold openly on the Phone Savan and Xieng Khouang markets for approximately 200 Francs per kilo, was priced at 5,000 Francs per kilo in Saigon, 10,000 Francs in Bangkok and 20,000 Francs in Taipeh. (1) Since 1961, the lowering in production of the drug led to a rise in price. In 1969, a kilo of opium which was sold at 26,000 Kip in Sayaboury cost 30,000 Kip in Vientiane and more than 35,000 Kip on the markets of Samthong and Long Cheng (2) It reached an astronomical price in Saigon, in Bangkok and Hong Kong, because of the risks involved in illicit traffic.

The revenues received by the Opium monopoly permitted the Colonial administration to "have healthy finances and a budgetary surplus." According to Mr. Dumarest the general budget of French Indochina which was 20 million piasters in 1900, surpassed 100 million piasters in 1931-32. The following percentages of the budgets provided by the opium Monopoly show well its importance:

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- (1) Dumarest, *Opium and Salt Monopolies in Indochina*, State Thesis, Faculty of Law and Economic Science, Lyon, 1938
 - (1) Jean Bertolino, *In the Land of a Thousand Happinesses*. Atlas #32, March 1969, page 16
 - (2) Most of the opium sold in Samthong and Long Cheng came clandestinely from Vientiane which get it from Burma in the same Marver

1920 :	19%	1930 :	9.5%
1925 :	10.5%	1932 :	4.7%

Thus opium seemed to be a preponderant factor in the budgetary equilibrium of the Colonial Administration.

When France left Indochina, now divided into independent states, the Opium Monopoly also disappeared. However, opium continued to play just as great a role in the economy of Laos. At the end of 1970, an eminent personality of the Kingdom announced to BBC in London that revenue from opium formed a substantial part of the national budget. However, it is important to note the greatest percentage of opium is used to perpetuate fraud and contraband and often covered up and even organized by high personalities in the Kingdom. In effect, since 1954, the opium monopoly has passed into the hands of the most powerful families of the countries who share their profits with their friends, the prosperous Chinese merchants of Vientiane, Savannakhet, Pakse, Luang Prabang and Xieng Khouang. French Civilian pilots were not any less implicated in the affair, which certain American pilots know well today. We have been informed of two heroin factories, one in Luang Prabang and the other in Houei Sai. Solidly protected, they are well fed by opium coming from Burma.

At the end of this study, we are led to ask ourselves whether poppy cultivation will continue given international conventions, the horrible effects of addiction and corruption, and the present evolution of production in the country. A law has been proposed to the National Assembly for the prohibition of the cultivation, fabrication, consumption, purchasing, transport, and ownership of opium and its derivatives (1). But, no substitute crop has been proposed. Under these conditions, the law - even if it is passed - will be neither realistic nor applicable as long as opium continues to remain a financial source for a large percentage of the Lao population, and as long as no effective control can be exercised over its production.

It seems to us that the most reasonable solution is to replace poppy cultivation by either tea or coffee or even citrus and fruit trees from Europe (Peaches, pears, Strawberries etc...) which are easily adaptable to mountainous regions. These crops would have the advantage of easily finding a market in South-East Asia and could, if rationally approached, efficiently contribute to the economic development of Laos. The problem of the transport of perishable items, however, must be solved.

(1) This Law was promulgated on September 24, 1971 by the King Savang Vatthana, Sovereign of the Country (Le Figaro, Paris, 25-26 Sept, 1971)

Livestock Raising

If agriculture is the main occupation of the Hmong, livestock raising occupied a no less important place in their traditional economy. National self-sufficiency and ancestral customs have maintained the importance of this activity over the centuries. We will successively study the domestic animals with which the Hmong are concerned.

1. Poultry

This is certainly the most widespread type of livestock raising among the Hmong. Poultry is indispensable to everyday living. It must be used to "call back the soul" of a sick child, for the traditional marriage ceremony, a young mother needs sufficient amounts in order to satisfy her need for a high quantity of protein, it is also needed by the dead person who wishes to construct a new life. In short, poultry raising is directly tied to the Hmong conception of life. Usually a Hmong family owns 10 to 30 cocks, hens and chickens (1). The climate and the raising methods usually make it so that the Hmong poultry is superior to that of the plain. For example, a Hmong hen is as large as a French laying hen. The Hmong mainly feed their poultry on corn and paddy, twice a day, in the morning at sunrise and in the evening at sunset. This is an important point. The rest of the day, they wander freely in front of and around the house, complementing their diet. In the evening, they return to the chicken coop, built near the main house. This is why the victim to be sacrificed the next day is always chosen at night.

However, a Hmong hen only lays on the average, 80 to 100 eggs per year while a laying hen will give 200 or more. This is the reason why, in a Hmong village eggs are fairly rare. They are saved, put away and consumed only rarely, but, they are used for the witch-doctors altar and various ritual operations.

Caponizing is regularly practiced which allows the young capons to reach two to three kilos. There are generally reserved for the festival of the new rice and above - all the new-year's celebration. They are also given as gifts.

Hmong villages do practice duck raising when they are near a river, swamps and ponds. Before the hostilities of (1960), the old Khang Khay "Meo" on the Southern end of the Plain of Jars, possessed a large number. Today, duck raising is relatively widespread from the Sam Thong - Long Cheng region to Sayaboury Provinces.

(1) A survey reveals that the average poultry stock in a Hmong family will include 4 or 5 hens and two or three cocks. The hens usual deliver 2.5 broods per year, 6 to 10 chicks living per brood.

2. Pigs

Pig raising is without a doubt a favorite of the Hmong. It provides not only meat but above all lard, indispensable for domestic cooking and other uses.

In Xieng Khouang province, we found that there were from 5 to 10 pigs per family. (1) There are two types of pigs: one which is spotted black and white, is the most common; the other, probably originating in Europe, has long pink bustles like those of pigs in France. This last is considerably larger and better built.

The sows and their young are often allowed to wander around and usually spend their time rooting in the bushes, under the storehouses and the awning put out on the house during the rainy season. The others, which are to be butchered on the New Year are kept in stys to protect them. These are proudly shown to all visitors passing by. Not all Hmong build stys, however, and allow their pigs to wander freely in the forest. It is something to watch a whole band, big and little, running from all directions in response to their owner's calls. The pigs are fed at the same time as the poultry, with corn, bran, banana leaves, wild banana trunks, in winter, and with bean leaves, Bourbon palm trunks during the rainy season. The pigs fight loudly over their twice daily feed in their wooden stys in the small court before the house. These animals may reach a large size but, because of their fat, give little meat. The smaller pigs from the plain are referable for butchering.

The Hmong generally preserve what pork has not been served on eaten during ceremonies or festivals. This preservation is done in two ways.

1. The lard is salted and hung in the rafters. It is slowly smoked by the heat and wood smoke. This method is used among all Hmong.
2. The pork is boiled in a large pot. Once it is well cooked, it is mixed with the grease and ginger is added. The whole batch is preserved under grease in earthen ware pots. This second method of preservation is longer lasting (6 months to a year).

Indian Oxen and Buffaloes

The mountains of Northern Laos, because of their particular climate, are natural grazing areas for large livestock, dew and fog cause the grass to always be fresh. One finds that there are herds of Indian ox and buffalo grazing in a half-wild state in the forest and on old rays. This type of raising, particularly important because then are sacrificed to the dead and protect or spirits, has regressed appreciably since the end of World War II. The old Hmong often talk with nostalgia about the "good old days (before 1940) when each family had around 10 ox and buffalo." Decimated by 25 years of war, large livestock has tended to disappear without being able to reestablish itself properly.

(1) According to a survey, the average stock of a Hmong family was:
2 sows and one Hog. The sows generally had one litter per year,
6 piglets per litter.

At that time, the Khang Khay "Meo" tasseng had several hundred ox and buffalo. Today, this walking capital has become a great source of pride for those who can afford it. Only well off families can indulge. In 1969, there were, in the upper Samthong region, 400 ox and buffalos belonging to several brothers in an extended family. Another herd, equally large, grazed on the old ray between S Samthong and Long Cheng. There were also smaller herds in the region of Muong Cha, known for its grazing land. These animals were, for the most part, the remainder of the herds devastated in the last 10 years in the Xieng Khouang area.

Ox as well as buffalo do not need any particular care. They are allowed to run around in the wilds all year, being watched and controled only occasionally. Among the Hmong as well as among the Lao, in general, theft is relatively rare. Periodically, once grass becomes scares, several families get together and move the livestock from one mountain thēanother. Each displacement is a true expedition.

Generally, the Hmong prefer the ox to the buffalo. First because of the quality of the meat, secondly, the ox has a certain docility which the buffalo, used to living in a wild state, does not have. The buffalo can be very dangerous; one has only to watch it charge those who disturb its tranquility. To eatch an ox and above all a buffalo under these conditions is an art which demands much patience. Often, the Hmong are forced to use their muskets to stop the animals, when they become too dangerous, if the ceremony does not require a living animal.

In traditional Hmong society, livestock is not generally used for pulling. With the exception of several isolated cases which we will study in the following chapter. Livestock raising responds more to a religious than consummer need. Each time calavirty hits the collective, they always ask the ancestorsinn the sky or the local spirits to protect them. As recompense one or several buffalos are promised to them, depending upon the gravity of the situation. But, often, funerals entail the largest sacrifice "We observed," writes B. Bourotte, "the killing of two ox the fifth day following the death, three the sixth day in addition to one in honor of the French visitors and eight the morning of the burial. The ox were valued at approximately a thousand piasters... The skins would accompany the dead and the flesh would be eaten by the assistants. To eat and to drink were the main a activities until the "body has arisen"..."(1) The older and more infuential the dead, the greater the sacrifices. At the funeral each of his adult sons, as well as those of relatives and friends, must sacrifice an ox, to render a last homage to the dead.

The adsence of preservation methods usually of meat, followed by several months with-out it. We will return to this when we treat the standard of living of the Hmong. The only preservation method consists of salting the mear and drying it by heat or sun.

(1) B. Bourotte: Marriage + Death among the white Meo in the Nong Het Region (Tran Ninh), Indochina Institute for the study of Man, Vol VI, 1943, Hanoi, pages 33-56

4. The Horse

The horse holds an important place in traditional Hmong society. This is reflected in the manner in which the animal is treated. Contrary to the ox and buffalo, each horse has a stable in front of the house. Every day hay or young corn stalks are cut; they also receive ears of corn and paddy. Before each long trip, the people make sure the horses have enough food; it is not unusual for the owner to rise several times in one night to feed an animal which will take a long trip the next day.

Of all the domestic animals, the horse plays perhaps the most important role in the self-sufficient society of the Hmong. Just as the ox and the buffalo are indispensable for rural activities on the plains, as is the horse for agricultural activities in the mountains. The use of the horse is quasi-general in the areas where topographical and traditional factors exclude the use of carts. Following each harvest, the horse brings back two large loads of paddy or corn secured by rope on both sides of the pack saddle. However, as we saw earlier, most of the transport is done by man. During the low period (end of March - beginning of April), the horse will be used to accompany his master, temporarily transformed into a merchant, on long trips, carrying vastly different articles on its back (cloth, thread, clothes, cooking utensils, etc.).

But the horse is above all a prestige animal. The traditional social hierarchy is determined by the quality of a person's saddle-horse. The richer the man, the more vigorously he tries to acquire a valuable horse which becomes his pride and joy. (1) These animals, always well taken care of, almost never participate in agricultural activities.

To conclude, one finds around Hmong villages herds of semi-domesticated goats. From time to time, one is chosen and caught for a ritual sacrifice. However, goat meat is not well appreciated by the Hmong who prefer by far pork and beef. But when the occasion comes, they will eat it willingly.

The Hmong seem to be perfectly situated to raise livestock. The mountainous climate is more healthy than that of the plain; the humidity is conducive to pasture land. But the mountaineers only know how to raise small groups of animals which are mostly destined for religious and shamam ceremonies. The traditional pastoral methods, the absence of any infrastructure (bridges, roads), the lack of well organized livestock markets and, above all, the misunderstanding of the possibilities of the mountains of Laos, constitute a severe bottleneck in the expansion of livestock raising.

(1) Read H. Roux, op-cit, p. 392

C) Hmong Handicrafts

Handicrafts also have their place in traditional Hmong society. They become more important as the distances between villages widen. The Hmong must satisfy most of his needs through handicraft. A farmer by profession, he becomes a carpenter, furniture maker and basket weaver during the off months. Formerly, he made his own bowls, wooden spoons and hemp sandals.

Each Hmong village usually has a blacksmith who, for a few ounces of opium, will supply hoes, hatchets, hedge-bills, sickles and other agricultural instruments. He may become, after acquiring a certain professional reputation, a jeweller or gunsmith. At the present time, one may find, in the stoves at Long Cheng, Hmong necklaces, bracelets and rings of extraordinary execution. On the other hand, muskets are on the way out and are only made on demand (for gifts, souvenirs, etc.).

Let us not forget the flute, jeiv's harp and "qeej" (1) mkers: Hmong culture is tightly attached to these pastoral musical instruments. On starlit nights, one can hear the soft notes of the flutes and the jeiv's harps, filled with poetry, binding young men and women together in unforgettable idylls; while the "qeej" accompanies the dead on his last voyage.

We must point out, at last, the survival of the rare weaving done by Green Hmong families. We have seen earlier why Hmong cloth was gradually replaced by foreign cloth.

(1) Mouth organ, symbol of the Hmong people.