

3. ANIMAL PRODUCTION AND RESEARCH IN THE KHMER REPUBLIC

Chau KHIM*

The Khmer Republic is mainly an agricultural country where animal husbandry is of utmost importance for the national economy. Especially raising working cattle is a must for rice crop which is the very base of our food.

For many years our government makes animal husbandry and important problem and tries to impose on the measures of conservation and animal health (fighting contagious diseases and parasites) and on breeding practices for working endurances and for greater production of milk, meat and eggs.

Our general 1968 census showed the Khmer live-stock to be 9,553,837 heads distributed as follows:

Bovine	1,918,240	heads
Buffalo	717,701	—
Swine	1,151,144	—
Equine	7,932	—
Caprine	975	—
Ovine	1,455	—
Elephants	582	—
Poultry	5,755,798	—

The destruction of livestock caused by the war during the last three years is difficult to determine but in the whole this is assessed to be as high as 30% to 50% depending on locations.

The above census shows the importance of livestock and gives us the ratio of large animals (cattle and buffalo) of two heads per capita. Cambodian farmers use cattle mainly for agricultural works: cattle is used for rice crop in soft and sandy fields and buffalo in lowland fields of hard and clay soil.

The Cambodian cattle is a slender and strong animal, in general it has a fallow coat, and sometimes cross-bred with Indian and European races. It is 1 meter 20 to 1 meter 35 tall and weighs from 300 to 450 kilos.

The Cambodian buffalo is stout, strong and compact animal found in boggy or marshy regions. It has a placid temper and a dark grey coat. It is 1 meter 40 to 1 meter 50 tall and weighs from 450 to 600 kilos.

It is less precocious than the cattle and very susceptible to contagious diseases, especially to rinderpest which caused a great loss during the last outbreak.

The buffalo has extremely sturdy body and can draw heavy load of 900 to 1,300 kilos. It is often used for lumbering and for long trips. It is a big eater but easily pleased with coarse roughage. It is more susceptible to heat than cattle and need water to live in. It likes dipping in ponds, marsh or swamp whenever it can.

Pigs: Hog-raising in the Khmer Republic is still a small familial type business. There is a great variety of race and breed of hogs raised ranging from the long snout Iberic breeds to the short snout Asiatic breeds. The introduction of improved and fast growing breeds (Yorkshire, Berkshire) resulted in a greater varieties of crossed-breeds.

* Deputy Director, Animal Production Health Service, Khmer Republic.

In general, hogs are raised in semi-enclosed habitats. Piggery is built under the homes. Hogs are fed two to three times per day with cooked garbage, rice bran, chopped banana stems or waste food of all kinds.

Since the onset of war, several industrial type hog-farms had been established in the Capital and vicinities. They have imported other breeds (Landrace, Duroc Jersey) from Thailand, Australia and the Philippines. And hog-feed has been improved with some degree of satisfaction.

Poultry: In general poultry-raising is of family type business. There is a variety of local breeds. The importation of foreign laying breeds (Leghorn, Red Island, Kaki kambel) gives a satisfactory result. Now there are in Phnom-Penh and vicinities about twenty industrial poultry farms of laying hens to supply the city.

Activities of the Service of Production and Animal Health:

This Service created in 1920 under the name of "Service Vétérinaire—Zootechnique et des Epizooties" under the Ministry of Agriculture has been changed little by little with diversified functions, duties and responsibilities not only in the field of livestock health but also in the fields of husbandry and its exploitation, of the commerce of livestock, of legislation concerning veterinary sanitation etc. . . . and now named: "Service de la Production et de la Santé Animales". The capital investment of this Service consists of:

—A Central Direction in Phnom-Penh, branch offices in each province and secondary offices in one or a group of districts (called Srocks).

—A technical personnel of:

—Four doctors in veterinary medicine, graduated in the veterinary schools in France.

—Three bachelors of sciences, trained in the universities of the USA.

—50 veterinarians graduated from the University of Agriculture in Phnom-Penh.

—72 "Controlleurs" of Epizooties and husbandry graduated from the former National School of Agriculture, Animal Husbandry and Forestry.

—200 "Vaccinateurs" recruited and trained in "Lycée Agricole".

—Experts, foreign specialists of the F.A.O., of the Colombo Plan giving us their help and their participation in the Service.

The "Service de la Production et de la Santé Animales" is chartered with two important functions:

—A sanitary function consisting of preserving livestock by fighting contagious diseases and parasitic infestations prevailing in the Khmer Republic by preventive vaccination and treating these diseases and parasitic infestations.

—An animal husbandry function consisting of animal selection and breeding the local breeds with the more improved breeds for greater production and adaptability to their environment, and also of improving feeds and feeding practices and better habitats.

Sanitary Activities:

Since its early days, the Veterinary Service tried to eradicate contagious diseases of livestock prevailing in the Khmer Republic among which the most dangerous of all is rinderpest.

This disease deserve, our attention. Since 1962 the "Service Vétérinaire" has organized with the assistance and participation of international organizations larger scale program of vaccination aiming at eradicating it. Since the last outbreak in July 1964 in the province of Kompong-Thom, no seat or case of this disease has been reported. Our goal of eradication of this disease can be considered as reached in 1965 and as a

success of our Service efforts.

The next diseases in line are blackleg, anthrax, Pasterellosis. These diseases cannot be overlooked due to its rapid evolution and the high rate of mortality on the afflicted animals.

Thanks to our systematic program of vaccination of our livestock these diseases have disappeared for many years now.

Swine diseases the most common are Pneumo-enteritis and swine pest Vaccination against them gives good results.

As regards to poultry diseases, they are the same ones commonly found in other countries especially Newcastle disease, Fowl cholera and fowl pox and salmonellosis. They cause constant troubles in poultry farms.

Thanks to program of vaccination livestock raising of certain importance can be established, maintained and protected. In a whole, the sanitary situation is good. The results of our sustained efforts assured by vaccination equipment and teams of workers who answer the call at all time and in any remoted corners of the country were well rewarding. Unfortunately, due to war, vaccination program has been interrupted in many regions occupied by the enemy.

Animal Husbandry activities:

The numerical increase of livestock production was made possible by sanitary activities, the better quality of livestock was the result of our husbandry activities which contribute to better yield precocity and production through selection, breeding practice, and also through improved animal habitats, condition of living, improved feeds and feeding which should be first undertaken before any selection or breeding can be done. Our works in this field were assured mainly by our 4-State owned experiment station under the charter of the "Service de la Production et de la Santé Animales" before the outbreak of war. The most recent modern and beautiful of these experiment stations was the "Centre d'élevage de la Fraternité Khmero—Japonaise" in the Province of Kompong-Cham. This station has land area of 900 hectares, 30 buildings with all of the modern equipment. This station has contributed a great deal to the improvement of livestock in the country. It had been chartered with dairy cattle production (Jersey) and beef production (Brun Japanese cattle), with swine and poultry production. Unfortunately this station is now completely destroyed in the early days of war in 1970 and now in the hands of our enemy.

The second station, that of Stung-Keo which of equal importance with a land area of 1,800 hectares offers a great hope in future. This station is to supply the country with dairy cattle and working cattle. It is located in the Province of Kampot at about 20 kilometers from the Province Administration Center. It possesses a sizeable number of agricultural equipment, a herd of dairy buffalo of the race Murrah, an interesting hog farm and disposes of 300 hectares of recently cleared land for crops. At present, this station is in the zone controlled by our enemy.

The third station, that of Stung-Meanchey, located at 12 kilometers of Phnom-Penh is the oldest, and the smallest with 33 hectares of land. It kept before the war a herd of 75 heads of cattle (Ongoles, Harriana, Métis-Sind, Métis-Frison-Sahival), 257 heads of hogs (Yorkshire, Large and Medium White Berkshire origine Japanese and Australian), a small feed mill. At present it has a herd of 20 heads of swine (Landrace), 300 ducks (Kaki-Kambel) imported from Thailand, a milking parlor which is our first step toward dairy industry development.

The fourth station, of secondary importance at Prek-Leap, located about 10 kilometers from Phnom-Penh on the East-side of Mekong River. It has at present 100 heads of hogs 20 of which are Large White Race imported from England and 2 boars Duroc

Jersey imported from the Philippines.

The bulls and boars as well as the females were selected by these stations and delivered to stock-breeders whose demands multiply from day to day.

In the cadre of our program of post-war reconstruction and development, the "Service de Production et de la Santé Animales" propose to put into work 9 projects of livestock raising aiming at increasing meat production, egg production and dairy production, improving the old public slaughter Houses.

Its program of action consists of two phases:

First Phase: Short terms Reconstruction, our service will try for numerical increase of livestock in order to repopulate as fast as possible our country side with working cattle necessary for the need of farmers whose heads are greatly inflicted by the war.

Parallely to our repopulating efforts, other measures will be taken, especially the general census and the systematic vaccination program of our livestock which were interrupted by the war for three years now, this is in order to maintain the sanitary situation among our livestock in a satisfactory condition as much as possible. Without this animal health program any husbandry effort would be a waste.

Second Phase of Development of medium and long terms concern the animal production. We will try to work both on the quantity and quality increase of livestock through application of the latest scientific findings in animal husbandry, of methods of production, and in improving of local breeds through better balanced nutrition and feeding practices.

The 9 projects that the "Service de la Production et de la Santé Animale" propose to undertake in the cadre of post war reconstruction and Development of Animal husbandry are as follows:

- 1)—Census program and vaccination program
- 2)—Livestock repopulation of working cattle and breeding stocks
- 3)—Development of cattle and buffalo raising
- 4)—Development of swine raising
- 5)— —"— of poultry raising
- 6)— —"— of dairy cattle raising
- 7)—Creation of a Center for artificial insemination
- 8)—Modernization of slaughter houses
- 9)—Studies and research in the field of animal health and production.

Parallely to the above projects we will make our efforts to obtain a stabilization of prices in order to guaranty the development livestock raising. We estimate that the following measures should be taken:

- Fix the prices of products needed in making animal feeds
- Fix the prices of working cattles and meat producing animals.
- Organizing markets for livestock meat and search for foreign markets.
- Organizing means of transport.
- Encouraging private national and foreign investments in the field of animal production.
- Formation of cooperatives and livestock association.

Discussion

N. Yamada, Japan: Do the farmers who grow crops on farm land keep animals? Is there any farmers or groups of farmers specialized in animal production, particularly with regards to poultry, in your country?

Answer: Yes, since the onset of war, there are several Chinese businessmen farmers and the groups of farmer specialized in animal production, particularly with regards to poultry (Leghorn and Red Island races imported from Singapore, Japan,

U.S.A.) and pigs in Phnom Penh and Vicinities. Yes, the farmers who grow crops on farm land, keep animals. In general, the Khmer peasant is an agriculturist and breeder.

N. Yamada, Japan (Comment): I personally would like to express my deep sympathy to the delegate of the Khmer for the serious destruction of animal industry in your country due to the war. I most sincerely hope that every success in the rapid reconstruction of animal industry in the Khmer will be achieved in the near future.

F. S. Mensalvas, The Philippines: In the feeding of your swine and poultry, it is possible that you are experiencing difficulty in the procurement of protein supplements like fish meal and soybean oil meal. If this is so, what substitutes for these feed ingredients have you resorted to?

Answer: With regards to the feeds of swine and poultry, we have in past year, the difficulty of procurement of protein basic products such as corn, fish meal, soybean meal, peanut meal for formulating the ration.

To eliminate this situation we have increased the percentage of rice and rice by-products in view of balancing the protein in the ration to meet the requirement of swine (21%), poultry (18%).

This is a temporary solution in time of war.

Kassim bin Ismail, Malaysia: What is the contribution of the backyard poultry farming to the Poultry Industry.

Answer: About 30%.