

## SWINE INDUSTRY IN THAILAND

# อุตสาหกรรมการเลี้ยงสุกรในประเทศไทย

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### General Introduction

Thailand with the area of 513, 115 sq km and it is divided into 4 geographical regions-North, Northeast, Central and South. As an agricultural country 80 per cent of the population of 47.5 millions work in the field of agriculture with only 10 per cent of the products from livestock.

Demand for pigmeat consumption was accounted to be  $145 \times 10^3$  metric tons which was 33.87% of overall demand of protein from animal sources ( $428 \times 10^3$  metric tons) (F.A.O., 1977)

With the potential of raw material production for animal feed and limited export for the time being Thailand is capable of running animal industry in the South-

East Asian region. Advanced technology together with limited land required for the operation, swine industry is appropriate at the present time.

### Swine Industry

**Background** Importation of several exotic breeds of swine from Australia, the US and Europe have started about 30 years ago by the Department of Livestock Development (DLD). After a period of studies, only 2 appropriate breeds. Large White and Duroc Jersey, emerged. In 1957 eleven centres for pig breeding were set up in order to increase and distribute those 2 breeds (Yuthavisuthi, 1980). Subsequently, Landrace breed was introduced from the US in 1962. It was adaptable to the environment and became another appropriate breed for Thailand.

Up to the present time, there are 66 centres for pig breeding and another 42 centres for research and training spread all over the country.

Private enterprise has participated in improving swine industry by launching the project of intensive farming around 20 years ago. Today, the chain of swine production is almost complete with several essential factors to be considered.

**Breed** Influence of breed selection and crossing programmes on reproductive efficiency. During the last decade, the white breeds have been more extensively used due to the fact that they excel in reproduction. Today, the 2 white breeds used are:

- 1) **Large White** (British breed) or **Yorkshire** (American breed): the female excel in birth and weaning litter size and 21 day litter weight.
- 2) The **Landrace** female ranks high in her pigs birth and weaning weight and 21 day litter weight. In addition, it tends to become sexually mature at an early age.

one intensive farm in Nakhon Pathom. It was found that average weaned litter size was 8.5-9.5 pigs, the average litter per sow per year was 2.02 and pigs reared per sow per year was 20 with average farrowing rate of 82%

Crossbreeding for commercial market hog production in Thailand has become a common breeding practice. Commonly, boars from 3 or 4 purebred breeds are used in a systematic rotational programme and crossbred females are saved each generation.

More recently, hybrid or crossbred boars have been marketed by commercial concerns in the light that crossbred boars are generally more aggressive, vigorous and hardy breeders than purebreds. Commercial producers have received mixed response as to good or bad experiences with such crossbred boar use.

It is estimated that for the present situation of swine industry, there are about 5 millions fattening, 150,000 boars and 500,000 sows.

**Nutrition** Cassava, a major root crop in the tropics, has found increasing use in the compounded feed industry in the countries of the EEC as a relatively cheap energy feed ingredient replacing cereal. In order to utilize cassava as protein supplement and other feed composition on performance, some researches on nutrition of pigs was carried out at the National Swine Research and Training Centre, Kamphaengsan, Nakhon Pathom, by a joint project of Kasetsart University and the DLD (Asian Livestock, 1979). Results demonstrated that cassava leaf silage can be used as protein supplement for growing pigs. Fermented cassava can be added in the ration up to 30.4% without any adverse effect on the growth rate and feed conversion.

In addition, the project also conducted other researches on swine nutrition. The main raw materials in the feedstuff produced in the country and its price approximation in baht/kg is shown in Table 1.

Table 1: Raw material produced in Thailand and its price baht/kg

Material	Price (baht/kg)
Maize	3.50
Broken rice	3.50-4
Rice bran	4.50
Fish meal	11.50-12
Soybean meal	8
Peanut meal	6-7
Coconut meal	3.50

N.B. The price of feedstuff for pig in the country is subject to change according to the situation of fish meal production as well as the price of soybean meal and maize in the world market.

As fish meal, soybean meal and peanut meal are essential ingredients in feedstuff, many factories were established for production to meet the annual demand, as shown in Table 2.

Table 2: Number of fish meal and soybean meal factories registered and their production (Feed Quality Control News, 1981)

Year	Number of Factories		Production (ton)		
	Fish meal	Soybean meal	Fish meal	Soybean meal	Peanut meal
1978	—	—	264,330	54,300	6,000
1979	—	—	244,350	33,300	9,000
1980	73	15	278,100	56,400	5,000
1981	78	26	251,000	—	—

Major feedmills which can produce pig feedstuff annually in ton during the last 4 years are shown in Table 3.

Table 3: Number of Feedmills and their production during 1978-1981 (Feed Quality Control, 1981).

Year	Number of Feedmills	Production (ton)	Demand (approx. ton)	
			Fattening	Breeders
1978	30	1,153,000	1,870,000	532,500
1979	32	1,200,000	1,326,000	532,500
1980	27	1,432,000	1,819,000	532,500
1981	32	1,560,000	—	—

**Diseases** Two major enzootic infectious diseases, *Swine Fever* (1) and *Foot and Mouth disease* (1) cause problem in swine production. Furthermore, regular importation of superior genetic breeds both as purebred stocks or deep frozen semen introduce in the meantime exotic viral diseases such as *Pseudorabies* (1), *SMEDI complex*, *TGE* as well as *Atrophic Rhinitis*.

*Swine Erysipelas* does not play much role during the last decade as incorporation of antibiotics in the feed reduces the incidence.

Reproductive disease, the main cause of abortion and repeat breeding in sows, is *Brucellosis* (2).

### Control

- (1) Vaccination programmes
- (2) Test and slaughter

The kind of vaccination programme, type of vaccine used, schedule of injections, will vary from farm to farm.

### Other problems

1. Abortion, prolonged anoestrus, and infertility.
2. Respiratory disease in pigs in first week of life and during finishing period.
3. Swine dysentery.
4. Scours in nursery pigs.
5. Parasitism; mange; roundworms and whipworms.
6. Lameness.

**Market and Marketing** It is estimated that small farm holders and back yard farming supply about 55% of the total production in the country with only 45% coming from the intensive farming. Such estimation is not agreeable with the report of Koh (1981) which reported that the former contributed up to 95% whereas the latter supplies only 5% of the total production to the market. The potential toward increasing production by the latter is evident as existing fluctuation in the price of the live pig is still out of control. There is always a dilemma for pig producers both domestic and foreign markets.

**Domestic market level** The price of live pigs is subject to the bell shape that is, decreases to the lowest level every few years just like a vicious cycle. Such phenomenon causes bankruptcy to small and medium farm holders.

Domestic demand for consumption is accounted to be 15,000 pigs per day or 5.5 millions per year; more than 60% are slaughtered in the Central. Increased swine production is accounted to be 4.0%.

The majority of pig production is in Central and North of the Country, each region is accounted to produce about 40% whereas it is low in the Northeast and lowest in the South (Agricultural Statistic of Thailand 1978-1980)

**Foreign market** Sporadic FMD outbreak together with insufficient slaughterhouses in the country cause major constraint for exportation.

Export of live pigs from Thailand is not high and is mostly to Hong Kong. There is expanding market in Hong Kong for frozen piglets from Thailand. The export of frozen piglets from Thailand to Hong Kong rose from 82 tons in 1975 to 1,300 tons in 1978.

Table 4 indicates for the last 6 years of pig production and number of pigs slaughtered for domestic consumption. About 1.5 million families are involved in this section with an average of pigs/family.

Table 4: Number of pigs in Thailand and number of pigs slaughtered during 1976-1981

Year	Number of pigs in the country	Number of pigs slaughtered
1976	3,042,949	2,600,426
1977	3,536,088	2,710,022
1978	4,247,407	3,398,200
1979	4,159,169	3,671,599
1980	4,930,172	3,294,646
1981	4,925,825	3,451,714

Source: Department of Livestock Development, cited by Chaisrisongkram (1982)

Only two of modern or standard slaughterhouses, one in Bangkok is belonged to The Bangkok Metropolitan Administration (BMA) and the other in Banpong is belonged to The Preserved Food Organization (PFO), have a relatively large slaughtering capacity.

The municipal (BMA) slaughterhouse in Bangkok was built in 1960 with the assistance of DANIDA. Today it is run by the Livestock Trading Cooperation with a capacity of 3,000 pigs per 8-hour shift.

The PFO slaughterhouse in Banpong was built in 1964 with the fund from the German Agency for Technical Cooperation. Its capacity is 1,000 pigs per 8-hour shift.

In order to promote local production and exportation, the cabinet council in December 1980 approved private sector to establish his own slaughterhouse. On the condition that the owner does not have to give this property right to the government, 50% of all fresh meat can be sold to local market and the rest for exportation.

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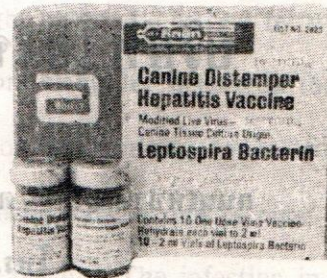
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