Thailand

Agricultural Mechanization Development in Thailand

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Mr. Viboon Thepent, obtained his Mater degree in Food Processing Engineering in 1985 from Asian Institute of Technology, and Bachelor degree in Agricultural Engineering in 1980 from Kasetsart University. He has worked as researcher in Agricultural Engineering Research Institute, Department of Agriculture since August 1980 up to present. He is responsible in conducting research on development of agricultural machinery, agricultural process and providing technologies as well as services to government and private agencies. He has held the position of Director of Postharvest Engineering Research Group since 2003.

Thailand is an agricultural country with approximately 21 million hectares, or 40.9% of the total area, is used for agricultural production. Thailand is located in the center of peninsular Southeast Asia adjacent to Myanmar is to the west, Laos to the north and east, Cambodia to the southeast, and Malaysia to the south. The south coast of Thailand faces the Gulf of Thailand. The total size of Thailand is 514,000 Km2 (51.4 million hectares).
In Thailand, 46.6% of population is engaged in agricultural sector. Thailand is the world’s largest rice exporter. Agriculture constitutes 10.1% of its GNP. Within the 21 million hectares used for agricultural production, 31.4% is for forest, 40.9% for farm holding, 27.8% for other agricultural purposes. The diagram below shows their shares in the agricultural sector in Thailand:

![Contribution for agricultural sector](image_url)

The mean monthly rainfall in Thailand respectively for the period of 1971-2000 and 1951-2011 are illustrated by the two diagrams below:

![Mean Monthly Rainfall in Thailand](image_url)
The total population in Thailand since 2002 is showed below:

Thailand is a newly industrialized country. Its economy is heavily export-dependent, with exports accounting for more than two thirds of its GDP. In 2012, Thailand had a GDP of THB 11.375 trillion (US$366 billion), while per-capita GDP was $5,390. Thailand’s agricultural sector produces 8.4 percent of the GDP. The Thai economy grew by 6.5 percent in 2012 with inflation rate of 3.02 percent. In 2013, the Thai economy is expected to grow in the range of 3.8-4.3 percent. The major crops in Thailand include rice, maize, sugarcane, soybean, cassava, rubber, horticulture crops, and oil palm.

The diagrams below show the relationship between energy input and crop
production in Thailand during 1950-2005, and the contribution of different energy inputs in crop production in the same period of time.

Thailand has developed its own range of agricultural machinery and equipment tailored for its special needs of its mainly agrarian population including planting machinery, rice threshers, tractors and walking ploughs, and recent machines that help with the cultivation, caring and harvesting of other crops such as fruit, rubber and cassava. Rice production is the foremost user of these machinery and equipments.