

#### LE QUYET TIEN

Center Research of Agricultural Machinery and Aero - Hydraulic Vietnam Institute of Agricultural Engineering and Post-Harvest Technology (VIAEP)

Regional Workshop on the Role of Mechanization in Strengthening Smallholders' Resilience through
Conservation Agriculture in Asia and the Pacific
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# I. Introduction and foundation of Vietnamese agriculture

- Geographical position of Vietnam: Southeast Asia, Bordered by Pacific Ocean, China, Laos and Cambodia. Area Km2 329,560; Population (millions) 92.48.
- GDP by industry: agriculture: 21.5%, industry: 40.7%; service: 37.7%
- Labor force (million): 49.18
- Labor force by occupation of agriculture: 48%; Industry: 21%, services: 31%
- Vietnam has two major deltas:
- +Red River Delta (Northern Delta)

Approximately 15,000 km<sup>2</sup> is covered by alluvium of two large rivers, the Red River and Thai Binh River.

+Mekong Delta (southern delta)

Widely over 40,000km², is fertile land, favorable climate. This is the largest delta of Vietnam. This land is most affected by climate change.

## I. Introduction and foundation of Vietnamese agriculture

- Pon the level of mechanization of agricultural production in Vietnam. Recent years show that the number of motors, agricultural machines used in agriculture has increased. Specifically, compared with 2006, the number of tractors increased 1.6 times, rice harvesters increased 25.6 times (mainly concentrated in the Mekong River Delta accounts for 75% of the number of harvesters across the country), spraying plant protection increased 6 times, water pump for agricultural production increased 1.2 times ...
- The rate of mechanization in many stages such as land for rice, reached 93%, sugarcane reached 82%. Cultivation, care also reached the rate of mechanization over 30% ... ect.
- Research and transfer of technology on mechanization in conservation agriculture has been paid attention and is studying method of replication in Vietnam.

Current research conservation agriculture is still small by region and specific crops such as corn, soybeans, etc.









#### Straw cover for peanut production



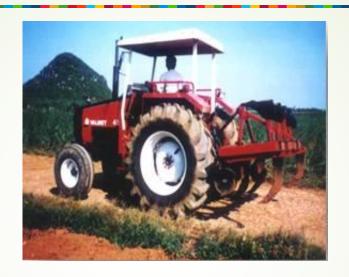
Limitations still exist:

a) The level of mechanization in agricultural production is low and not uniform





Compared with other countries in the region, the level of dynamics of agricultural machinery in Vietnam is low, with an average of 1.6 HP / ha of cultivation



Deeply flush 5-blade land

Deeply plow and do not overturn, to both ensure the depth and create underground channels to hold water when drought





Low technical infrastructure, clematis farming practices that impede the application of mechanization Field size in our country is small, scattered, scattered.



field in northern Vietnam



field in southern Vietnam

At present, Northern Vietnam has 70 million plots, each household has only 0.7 ha of cultivated land, including 3-4 plots. Although there is a policy of "consolidation of land plots", in general the situation is still scattered common. This limited the introduction of mechanization into the cultivation and harvesting stages.

- Vietnam's mechanics industry has not met the requirements of agricultural production, foreign investment in this field is still low
- Agricultural products in Vietnam only meet the quantity and quality of some machines such as rice cultivators, sugarcane reapers, maize, small tractors ... etc ...





























These are small machines that provide care

Foreign investment in the field of manufacturing and assembling engines and agricultural machinery is very little, from 2009 KUBOTA Vietnam Co., Ltd., ect...



- B Series (nhỏ hơn 30HP)
- L Series (từ 30 đến 50HP)
- M Series (hon 50HP)



- DC-35
- **DC-60**
- DC-70
- DC70 Plus



- SPW-48C
- SPV-6CMD
- NSPU68C
- SR-K800VN

#### Recommendations

- Strengthen the coordination and exchange of technology and equipment of mechanized research institutions in conservation agricultural production in Asia and the Pacific.
- Funding applied research programs and promoting knowledge of sustainable agriculture in Asia and the Pacific.
- Co-operation and linkage to create large-scale commodity production; provides the basis for the implementation of mechanization and transfer of scientific and technological advances in conservation agriculture production in Asia and the Pacific.

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