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VIETNAM'S AGRICULTURAL MECHANIZATION STRATEGIES

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I. EXISTING AGRICULTURAL IN VIETNAM

- ✓ According to statistical data, in Vietnam, 70% of the population is engaged in agriculture.
- ✓ Major food staples are rice, corn, legumes.
- ✓ With poor conditions and low level of education, peasants usually have habits that damage the environment and harm themselves.
- ✓ These include spraying of too much pesticides and burning residues as straw, corn stalks right in the field.

II. STATUS OF AGRICULTURAL MECHANIZATION-INVESTMENT AND USE (1)

- ✓ At present, the traditional production method based on human and animal labor still played a dominant role with a limited number of mechanized stages (**mechanization ratio for soil technology approximately 70% while is lower than 30% for other stages**) and the ratio agricultural labors over whole labors more than 50%. Thus, it can be concluded that the mechanization process at a preliminary stage
- ✓ Investment level of agricultural machineries was the highest in Mekong River Delta

II. STATUS OF AGRICULTURAL MECHANIZATION-INVESTMENT AND USE (2)

Invested Machineries

Year		Cultivation in agricultural field and cultivated soil for forestry plants	Immobile equipments	Fishing	Cargo ships for rivers and canals	Total	Comparison 2011/2001
2001	Horsepower	4,590,000	9,282,000	4,720,000	3,100,000	21,472,000	
	Ratio (%)	21.37	43.78	21.76	14.29	100	
2006	Horsepower	5,739,690	11,973,000	6,200,000	7,856,620	31,841,394	1.48
	Ratio (%)	18.03	37.60	19.70	24.67	100	
2011	Horsepower	9,740,240	15,804,360	7,449,358	9,485,310	42,479,268	1.33
	Ratio (%)	22.92	37.20	15.20	24.68	100	

Table 1. Invested engineering equipments for agriculture and rural construction
Source: Vietnam General Statistics Office, 2012

II. STATUS OF AGRICULTURAL MECHANIZATION-INVESTMENT AND USE (3)

Mechanization technologies

1 - Mechanization to improve yield and quality for main crops

- Comprehensive mechanization for rice production
- Mechanization in drainage and irrigation
- Development of greenhouse system and devices to create micro-climate area
- Comprehensive mechanization for Sugar-cane production
- Mechanization for corn and legumes

2 - Improvement of post-harvest technology to reduce losses, ensure quality and food safety

- Technology and equipment for rice seed processing
- Drying technology and equipment for agro-products

III. POLICIES AND STRATEGIES (1)

Recent years, the government has issued many regulations and program to support SAM. Some of them are as follows:

□ **Resolution No. 26-NQ/TW dated Aug.05, 2008 on agriculture, farmers and rural areas, that points out the tasks and solutions implemented till 2020, including the following two tasks:**

+ Building the agriculture sector toward modernization, and industrialization and development of services in rural areas;

+ Enhancing research, transfer and application of science, technology, human resources training, making breakthrough to agricultural modernization and rural industrialization.

III. POLICIES AND STRATEGIES (2)

- ❑ Framework of Adapting to Climate Change Programme in the period 2008-2020 by the Sector of Agriculture and Rural Development (Issued together with Decision No. 2730/QD-BNN-KHCN dated Sep.5, 2008 of the Minister of Agriculture and Rural Development) states that one of the key activities in minimization and adaptation to climate change of the sector is "the implementation of research program; the planning of infrastructure of agriculture and rural, farming systems of agriculture, forestry, fishery and salt production; prevention and mitigation of natural disasters, etc. towards enhancing adaptation to climate change "

III. POLICIES AND STRATEGIES (3)

- ❑ Action Plan of the Ministry of Agriculture and Rural Development has set the task of building 16 projects of developmental strategies until the 2020 **related to the field of agricultural and post-harvest technology**: **project of agriculture and rural development project; project of horticultural development; project of Water products development, project of mechanization and postharvest loss reduction in agriculture, etc.**

III. POLICIES AND STRATEGIES (4)

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III. POLICIES AND STRATEGIES (4)

- ❑ Resolution 48/NQ-CP dated 09/23/2009 by the Government about mechanisms and policies to reduce post-harvest losses of agricultural products, aquatic products
- ❑ Vietnamese Prime Minister signed Decision No. 800/QD-TTg on 04/6/2010 to approve the national target program on new rural construction for the period of 2010-2020.
- ❑ Project of development of high-tech agriculture is awaiting for government approval. The project was drafted by the Ministry, after consultation workshops of experts.

III. POLICIES AND STRATEGIES (5)

- ❑ To improve the quality and lower the cost of mechanized products for agriculture and rural development, it needs a comprehensive solution from developing orientation, research - development, planning and supporting policies from Government on investment in equipment, training and fostering of knowledge management as well as technical skills to operate the equipment, combining machinery complexes, technology assemblies to managers and skilled workers.

IV. OTHER INFORMATIONS

- ❑ **Developing orientation of agricultural mechanization in the process of agricultural modernization in coming years**
- ✓ ***Mechanization of production stage***
- ✓ ***Mechanization of the processing of agricultural - forestry – fishery products***
- ✓ ***Research on energy sources, motivation used in agricultural and rural production and applicable of engineering simulation in agricultural mechanization***

IV. OTHER INFORMATIONS

- ❑ **The solutions promoting the mechanization of agricultural and rural development**
- ✓ *Speeding up the implementation of the Resolutions*
- ✓ **Developing policies to encourage investment in dynamic engine production, agricultural machinery for agriculture**
- ✓ **Human resource policy: short-term training program for farmers; Training of the management officers of agricultural engineering for mechanization of agricultural production and processing**

V. CONCLUSION (1)

- ❖ Mechanization of Vietnamese agriculture in “innovation” era was significantly improved. Farmers bought equipment for their own farming and doing service (about 95% of equipment were invested by farmer themselves). **Although this trend become more and more professional but the scale of investment and business is still small.**
- ❖ For complex combining equipment, agricultural-forestry-fishery processing assemblies that required high technology, the scale of investment is still limited.
- ❖ Level of comprehensive mechanization of cultivation stages is still low and concentrated only on soil preparation, threshing, water pumping and rural transportation.
- ❖ **Level of mechanization of transplanting, sowing, cutting and reaping stages is still low.**

VI. CONCLUSION (2)

- ❖ Development of machinery manufacturing industry provided dynamic engines, agricultural equipment for mechanize production and processing stages had a significant progress. However, for agricultural and processing equipment that required high technology for fabrication, the domestic machinery industry still did not meet the requirements.
- ❖ Some investment policies of Vietnamese government to support the development of agricultural mechanization began to take effect. So the economic sectors has invested in production, manufacturing, agriculture, forestry and fisheries processing, farmers can get loans with preferential interest rates, leverage the agricultural engineering to serve better the mechanization process before, during and after harvest.



Thanks for your attention!



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