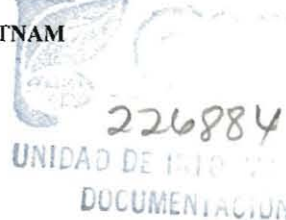




NEW PROGRESS OF CASSAVA RESEARCH AND EXTENSION IN VIETNAM

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INTRODUCTION

Vietnam Cassava Program support by MARD in close cooperation with CIAT of the Nippon Foundation project, promoted the rapid multiplication and wide distribution of high-yielding and high-starch varieties, and the adoption of sustainable cassava production practices, especially in the Central Coast, Central Highlands and Northern mountains and uplands

**Objectives:** The study aims to supply a production map of cassava in Vietnam and the central, production cost and production technique of farmers and supply chains, with a view to describing the lessons learned from past development interventions and their implications for a strategy of future investment in cassava research and development

METHODOLOGY

**Field surveys:** In order to meet the scope of the study, we will have field surveys to get primary information on farmers, trades, and processors, do group discussions with staff of Department of Agriculture and Rural Development in seventeen provinces (Thai Nguyen, Tuyen Quang, Phu Tho in the North mountain and upland; Ha Tay in Red River Delta; Thua Thien Hue in the North Central Coast, Lam Dong, Dak Lak, Dak Nong, Gia Lai and Kon Tum in the Central Highlands, Quang Nam, Quang Ngai, Binh Dinh in the South Central Coast, Dong Nai, Binh Phuoc, Ba Ria - Vung Tau, Tay Ninh in the South-East region).



**Choice of site:** Inclusive of visits to seventeen provinces during Sep - Dec. 2007, six provinces were chosen as the project site for analyzing and evaluating of cassava cropping systems, varieties, agronomic practices, labour use, crop utilization and farm income. The team group from TUAF, NLU, VAAS, CIAT have paid three visits to access and define the site in four provinces of Thai Nguyen, Tuyen Quang, Phu Tho, Ha Tay. Since then scientists from the Nong Lam University and Enrteam have paid three visits to access and define the site in three provinces of Binh Dinh, Gia Lai and Thua Thien Hue. Finally, Cai Lam village (in Phu Cat district, Binh Dnh province), Bau Can village (in Chu Prong district, Gia Lai province), Hong Ha village (in A Luoi district, Thua Thien Hue province) were chosen to be research site.



**Collecting and analyzing data:** Collecting of map cassava and analyzing secondary data of the research region, conducting general survey to identify cassava production zones and present cropping pattern, collecting economic data of production costs, cropping patterns performance at farm level (sample of good farmers: 2 good, 1 not good / province; techniques: sample of good farmers, seasonal issues: sample; selling: sample); analyzing data collected by Excel program with a view to describing the lessons learned from past development interventions and their implications for a strategy of future.

RESULTS AND DISCUSSION

New Progress in Cassava Research and Extension

Up to now, more than 350,000 ha of cassava in Vietnam were planted with new varieties, this corresponds to about 75 % of the total cassava area in the country. Ten million stakes of new varieties, mainly KM94, KM98-5 and KM140, were distributed to various provinces in this project. Cassava yields and production in several provinces have doubled, stimulated by the construction of new large-scale cassava processing factories. New high-yielding cassava varieties and more sustainable production practices have increased the economic effectiveness of cassava production.

There are now 60 cassava processing factories in operation and another seven factories under construction, with a total processing capacity of 2.4-3.8 million tones of fresh roots/year. Total cassava starch production in Vietnam was about 800,000-1,200,000 tones, of which 70% was exported and 30% used domestically.

Using cassava in bio-ethanol production is also a growing interest in Vietnam. Petrossetco, a division of PetroVietnam, plans to build two tapioca-based ethanol plants in southern and central Vietnam. The state-run company signed two separate deals with Japan's Itochu Corp. and UK's Bronzeoak Group last year. The joint venture with Itochu will see the set up of a plant with a 75 million litre annual capacity in southern part of the country. Petrossetco and Bronzeoak are investigating the possibility of a 150 million litre plant in central Vietnam.

**CONCLUSION: Lessons from Vietnam (Trip report of Mr. Boma about Nigerian study tour to Thailand, Vietnam and China)**  
"Vietnam is a classic example of how cassava can contribute to rural industrialization and development. Previously, people were reluctant to grow cassava because they thought that cassava caused soil degradation and produced low profits. But in reality one hectare of cassava can produce 60-80 tones of fresh roots and leaves. The situation has changed because of the development of sustainable cultivation techniques and new high-yielding varieties with the availability of a large and growing market demand. Cassava has become a cash crop in many provinces of Vietnam. Cassava chips and starch is now being produced competitively, and cassava markets are promising. The combination of wide spread production of fresh cassava roots and the processing of cassava into chips starch and ethanol has created many jobs, has increased exports, attracted foreign investment, and contributed to industrialization and modernization of several rural areas".

Many farmers have become rich by growing cassava. For example, in An Vien and Doi 61 communes in Trang Bom district of Dong Nai province, 97% of the agricultural land has poor gray sandy soil. Cassava is the main crop (1,099 ha), followed by cashew (534 ha) and other minor crops. Previously, farmers grew the old cassava varieties Gon and HL23 with the average yield about 9 - 12 t/ha. In recent years, by growing new high-yielding varieties and applying improved cultural practices, the average yield in this commune increased up to 16-32 t/ha. Many farmers are now growing varieties KM94, KM140, KM98-5, obtaining 25-35 t/ha in areas of 3-5 hectares



In the Cai Lam village (Phu Cat district, Binh Dinh province), Bau Can village (Chu Prong district, Gia Lai province), Hong Ha village (A Luoi district, Thua Thien Hue province) of Central provinces of Vietnam, the total variable cost of cultivation in 2007 was about US\$ 455- 567.5/ha, at an average root yield of 22.0 t/ha, the production cost would be US\$ 20.68- 25.79 /t fresh roots. Gross income is US\$ 1,155- 1,237.5 /ha. Net income is US\$ 670 - 700/ha. On average, labour accounts for 59.9% of cassava production costs. In some regions, like the Binh Dinh and the Gia Lai, this may be as low as 52.8% and 68.7%, respectively. The average labour requirement is 125 mdays/ha. The second largest cost item is fertilizer, constituting 41.8% in Binh Dinh province and 24.7% in Gia Lai.

**Table 1. Cassava varieties and agronomic practices in Binh Dinh province in 2007**

Village - District	July-Dec - Phu My	July-Aug - Phu My	July-Oct - Cat Lam
Land use	On the upland	On gentle upland	In hills
Cropping system	C. monoculture	C. monoculture	C. monocropping 14
Varieties	KM94, KM98-5	KM94, KM98-5	KM94
Planting rate	27 x 115 (5.7 t/ha)	27 x 115 (5.7 t/ha)	27 x 115 (5.7 t/ha)
Planting method	horizontal	horizontal	horizontal
Planting depth	0.1 m	0.1 m	0.1 m
Planting angle	45°	45°	45°
Soil water (cm)	15-20	15-20	15-20
Wind control	bar	bar	bar
No. of weeding	2	2	2
Time of weeding	Jan-Feb	Jan-Feb	Jan-Feb
Time of planting	July-Aug	July-Aug	July-Aug
Time of harvest	Jan-Feb	Jan-Feb	Jan-Feb
Time of weeding	Jan-Feb	Jan-Feb	Jan-Feb
Time of planting	July-Aug	July-Aug	July-Aug
Time of harvest	Jan-Feb	Jan-Feb	Jan-Feb
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