

# **EMERGING HORTICULTURE IN AFRICA: TRENDS IN HORTICULTURAL ECONOMY AND TRADE IN AFRICA: THE CASE OF THE SOUTH-WEST PROVINCE OF CAMEROON**

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## **INTRODUCTION**

Urban growth has generated considerable change for small scale farming in West and Central Africa as a growing share of farmers live in an urban environment (United Nations, 2006; Parrot *et al.*, 2008a,b,c). Urban growth and the urbanization process of rural areas also reduce the availability of potential arable lands. In this context, horticulture is particularly well suited since it requires small land areas and provides high returns on investments. Horticulture is still marginal compared to staple crops but it is an emerging activity among farmers in Africa. However, the intensification process emerging in Africa for horticulture suggests careful monitoring (Gockowski and Ndoumbe, 2004; Malézieux *et al.*, 2009).

### **Urban and periurban agriculture emerging as a major driver of agricultural growth**

Urban and periurban agriculture is emerging as a major driver of agricultural growth in developing countries (de Bon *et al.*, 2009). In Cameroon, the South-West Province is in the midst of the rise of the coastal growth poles in West and Central Africa (Cour, 2001). By 2020, about 200 million people out of a total of 400 million will live and work in these areas stretching from Dakar (Sénégal) to Douala (Yaoundé).

## **MATERIAL AND METHODS**

In this context, the study of market flows among local food markets can be a good indicator of nationwide trade flows (Almy and Besong, 1990). Our case study concerns Muea, a market town in the South West Province of Cameroon. By just interviewing traders from the Muea market, trade routes could be traced from the Northern to Southern provinces, *i.e.*, from the hinterland down to the coastal provinces of Cameroon. Muea was surveyed in August 1995 and again in June 2004. The surveys included a complete census of households where all houses and households were recorded for a random selection, a household survey where 300 households were interviewed, and a market survey.

## **RESULTS AND DISCUSSION**

### **Change in Africa at the turn of the 21st century**

Urban growth affects household income portfolios. In our case study, household incomes increased by 14% from 1995 to 2004, with a large shift from farm to nonfarm income. The share of non-farm income in the total income of the population increased from 40% in 1995 to 79% in 2004. Within agriculture, main activities shifted from staple crops to horticulture, both for sale and for home consumption, determining important changes in cropping and farming systems. The contribution to employment by the local food market increased, which reveals

the social impact of the agricultural sector on employment. However, the turnover of the market declined by 40%. Since households managed to increase their incomes, this result suggests that farmers have now better access to other markets for trade.

Household self-consumption of food crops declined by almost 80% between 1995 and 2004. Self-consumption of food crops also faced a major shift. Self-consumption of horticultural products increased by 48%, while self-consumption of staple crops decreased by 89%. The share of horticulture in self-consumption increased from 6% to 47% of all self-consumption in food crops. In fact, consumer preferences have changed in Muea with new diets and an increased demand for food.

The average number of agro chemical inputs used by farmers doubled between 1995 and 2004. In the town of Muea, chemical expenditures increased from four to five times as it is the case for salt, pesticides and herbicides. Fertilizers and fungicides did not significantly increase during the period but they still remain in large use.

## PERSPECTIVES

Horticultural crops provide a better price/weight ratio than staple crops and are well adapted to small scale farming. However, intensification and new land areas remain necessary for keeping up horticultural production with a rising food demand from large cities on the coastal growth pole of Africa. Horticultural crops, as this study revealed, require large amounts of agro-chemical inputs that constitute a potential threat for health and the environment. As perishable crops, they are also vulnerable to the humid and hot climate of Central Africa. Improved storage facilities to reduce waste and improved monitoring of agro-chemical inputs are therefore prerequisites for a sustainable horticulture.

## REFERENCES:

- Almy, S.W., Besong, M.**, 1990. The farming systems of South-West Province. National Cereals Research and Extension Project, IITA/IRA/USAID, Testing Liaison Unit, Ekona, Cameroon.
- de Bon, H., Parrot, L., Moustier P.**, 2009. Sustainable urban agriculture in developing countries. A review. *Agronomy for Sustainable Development*, preprint.
- Gockowski, J., Ndoumbe M.**, 2004. The adoption of intensive monocrop horticulture in southern Cameroon. *Agricultural Economics* 30:195-202.
- Malézieux, E., Crozat, Y., Dupraz, C., Laurans, M., Makowski, D., Ozier Lafontaine, H., Rapidel, B., De Tourdonnet, S., Valantin-Morison, M.**, 2009. *Agronomy for Sustainable Development*, 28 : 43-62.
- Parrot L. (ed.), Njoya A. (ed.), Temple L. (ed.), Assogba-Komlan F. (ed.), Kahane R. (ed.), Ba Diao M. (ed.), Havard M. (ed.)**. 2008a. *Agricultures et développement urbain en Afrique subsaharienne. Gouvernance et approvisionnement des villes*. Paris : L'Harmattan, 264 p.
- Parrot L. (ed.), Njoya A. (ed.), Temple L. (ed.), Assogba-Komlan F. (ed.), Kahane R. (ed.), Ba Diao M. (ed.), Havard M. (ed.)**. 2008b. *Agricultures et développement urbain en Afrique subsaharienne. Environnement et enjeux sanitaires*. Paris : L'Harmattan, 203 p.
- Parrot, L., Dongmo, C. T., Ndoumbé, M. N., Poubom, C.**, 2008c. Horticulture, livelihoods and urban transition in Africa: evidence from South-West Cameroon. *Agricultural Economics*, 39(2): 245-256.
- United Nations** (2006). *World Urbanization Prospects - The 2005 Revision*. United Nations Population Division, Department of Economic and Social Affairs, New York, 210 pages.