DOES VEGETABLE PRODUCTION LEAD TO IMPROVED DIET QUALITY? THE CASE OF LAO CAI, VIETNAM

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INTRODUCTION

Lao Cai province is one of the vegetable production areas in the northern midlands and mountainous region of Vietnam yet its malnutrition and poverty rates are among the highest in the country. Nearly one-third

of children under five years are stunted and one-fifth are underweight (NIN, 2014). Poverty incidence is nearly three times the national average (GSO, 2012). Many rural households grow vegetables for home consumption due

to small land area (IFPRI, 2002) but vegetable consumption per capita remains low (GSO, 2012). Why?

PURPOSE

The aim of this PhD research is to look at the relationship between vegetable production and diet quality to determine causal relationship by comparing vegetable consumption and diet quality of vegetable and non-vegetable growers. We will also identify the other factors that may be causing the high incidence of child malnutrition.

METHODOLOGY

To do this, we will interview 480 households in Sa Pa, Bac Ha, Muong Khuong and Si Ma Cai (Figure 1) using a semi-structured questionnaire. We will measure their longterm usual dietary intake using the 24-hour food recall method which will be collected three days/week and in two seasons (June-July 2016 and November 2016) to minimise the within-person random error due to day-to-day and seasonal variations. The Household Food Diversity Index (HDFI) will be used to assess the household diet quality versus other dietary indices.



Figure1: Administrative map of Lao Cai province

Source: SRTM downloaded from http://srtm.csi.cgiar.org/ SELECTION/inputCoord.asp / Data: SRTM 90m digital Elevation Model (DEM) using ArcGIS10 <http://srtm.csi.cgiar.org/ SELECTION/listImages.asp>

WHAT HAS BEEN DONE SO FAR?

1. An Observational Study was conducted from July 22-August 28 2015 to select the days in the week on which we will measure the dietary intake. We found the consumption data days to be

Wednesday, Friday and one day at the weekend (depending on the market day in the district).

Figure 2. Photos of several households during the Observational Study in Sa Pa and Bac Ha districts





A meal in a richer household in Sa Pa town composed of fried pork, steamed chayote leaves and some spicy dips

Three-generation Tay household enjoying dinner at home in Bac Ha town



A Hmong couple with their daughter enjoying a meal of rice, boiled cabbage and in Sa Pa commune



A young couple in Thai Giang Pho commune enjoying a meal of rice and boiled fermented bamboo shoots

2. The paper-based questionnaire was pre-tested March 16-23 2016. It is now being exported to the CommCare tablet app before deployment in the field in June 2016.

Figure 3. Some photos during the pre-testing











The enumerator pre-testing the questionnaire in one household (2nd HH) in Bac Ha town



The various serving dishes used by the 1st HH in My Dinh district, Hanoi



PhD student recording weight measurement of the wife in the 4th HH in Bac Ha town



PhD student recording height measurement of the husband in the 4th HH in Bac Ha town

REFERENCES

GSO. 2012. Result of the Vietnam Household Living Standards Survey 2012. Hanoi: GSO.

IFPRI (2002) "Fruits and vegetables in Vietnam: adding value from farmer to consumer." Washington, DC, International Food Policy Research Institute, 297 pp.

NIN (2014) "Prevalence of undernutrition by severity - 2014 - by 6 ecological region." National Institute of Nutrition.

Van Duyn, M.A., and E. Pivonka. 2000. "Overview of the health benefits of fruit and vegetable consumption for the dietetics professional: selected literature." J Am Diet Assoc 100:1511-1521.

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