

Contribution of African Indigenous Vegetables to Food Security: A household Nutrient Intake Analysis in Kenya.

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Introduction

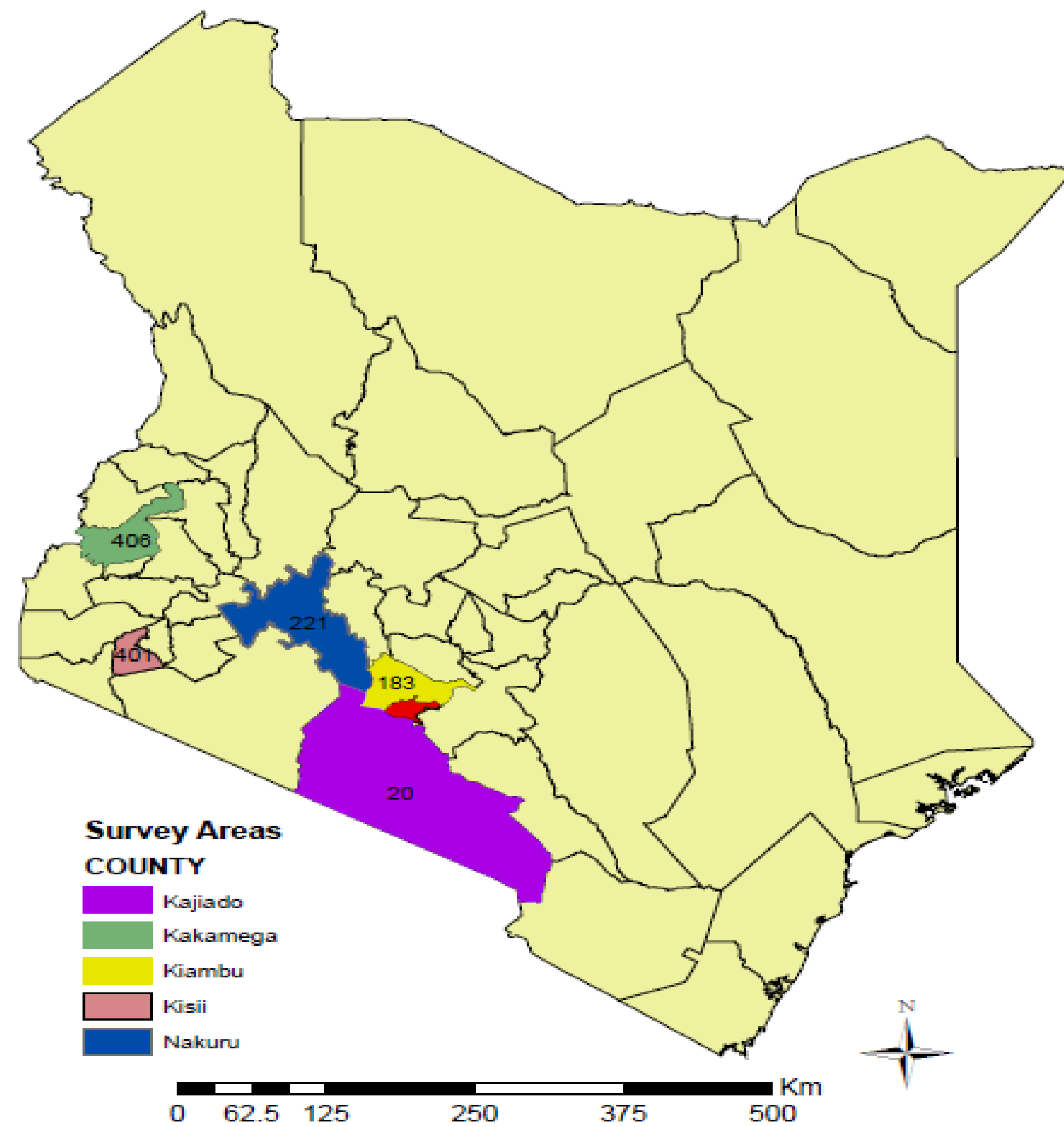
- ❖ Food security is a serious recurrent problem in developing countries.
- ❖ Dietary modification which is a food-based strategy to combating malnutrition is a novel intervention.
- ❖ Incorporating African Indigenous Vegetables (AIVs) meets daily dietary nutrition and energy requirements.
- ❖ However, AIVs have received little attention in the debate on food security.
- ❖ An analysis of the nutritional advantages of incorporating AIVs in the diets reveals that they indeed play a significant role in providing the needed nutritional security.

Research Objective

- ❖ To determine the role of African Indigenous vegetables in enhancing Food Security: Taking Rural and Peri-Urban Households in Kenya as a case study.

Study area - Kenya

HORTINLEA KENYAN SURVEY SITES (2014)



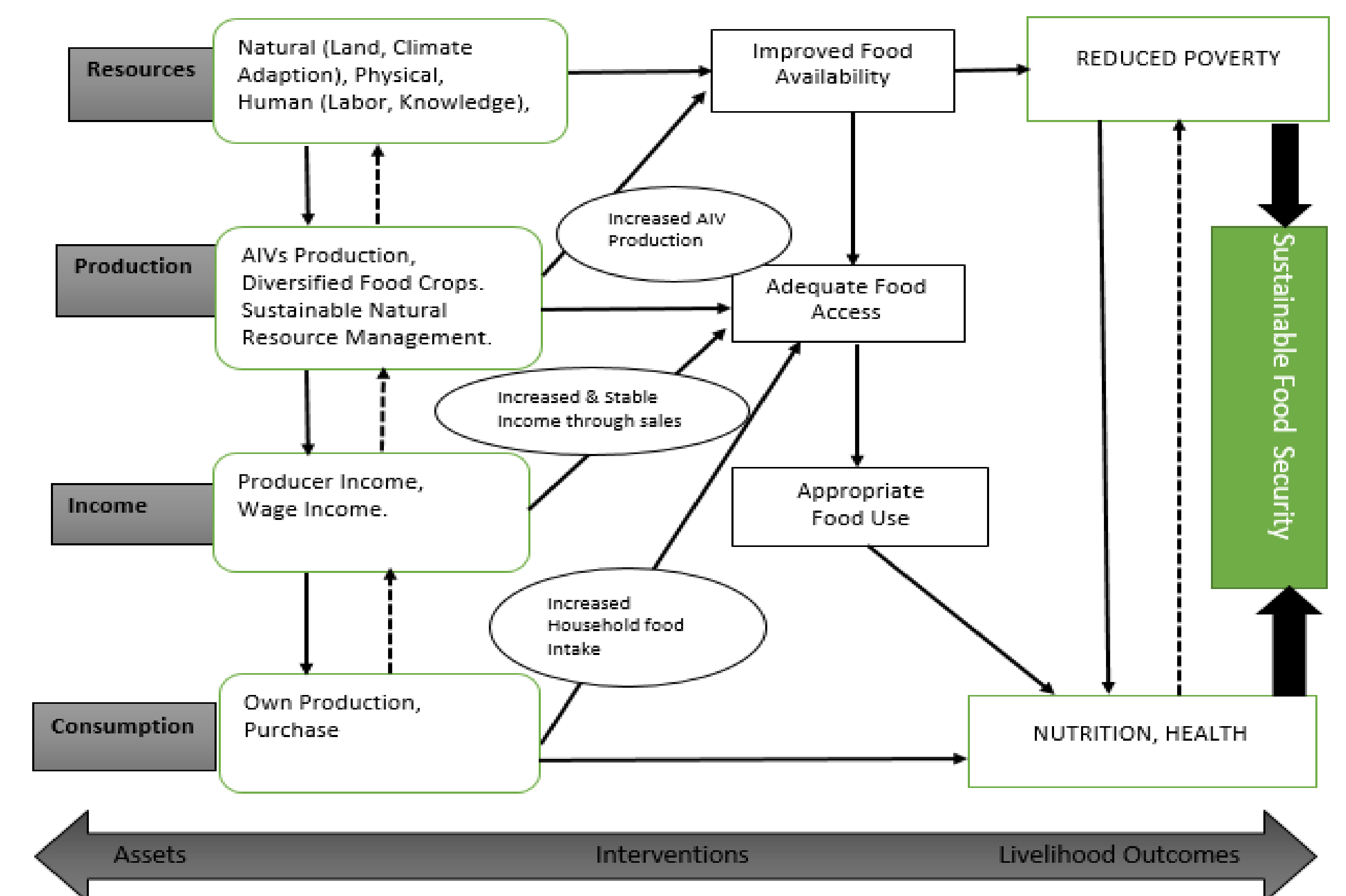
Methods and Tools

- ❖ We use data from the HORTINLEA survey collected in rural and peri-urban areas of Kenya in 2014 using household level structured questionnaires.
- ❖ 1232 Household interviews.
- ❖ Price questionnaire
- ❖ Country specific Food Consumption Tables (Maundu et.al,1999;FAO and INFOODS, 2012;Lukmanjiz et.al,2008)
- ❖ ADePT-Food security Module of (ADePT-FSM) data analytical software.
- ❖ The average dietary energy and protein supply from indigenous vegetables is remarkable. Our results are consistent with earlier findings but reveal several new insights.

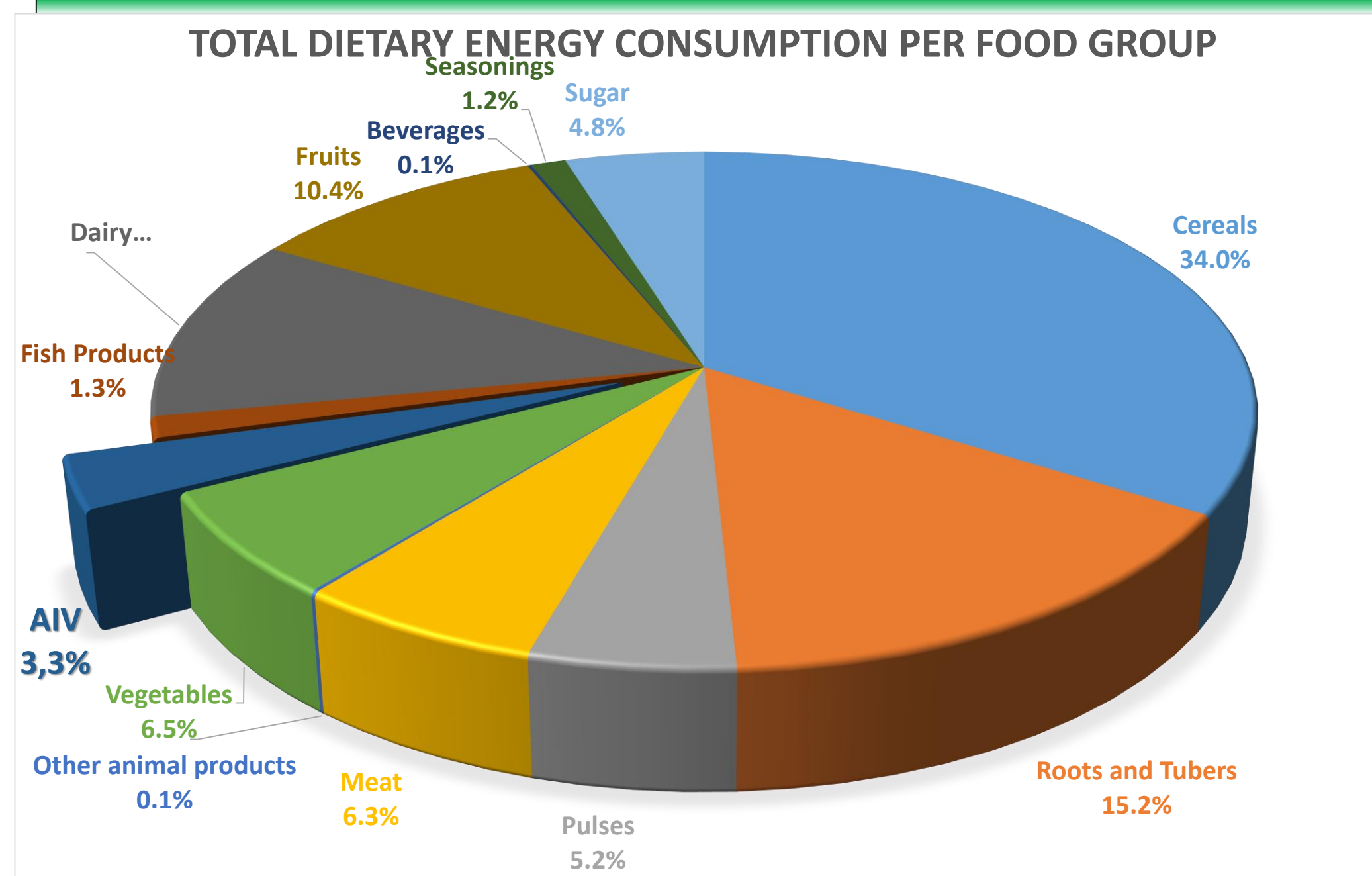


Hortinlea Household Interview 2014

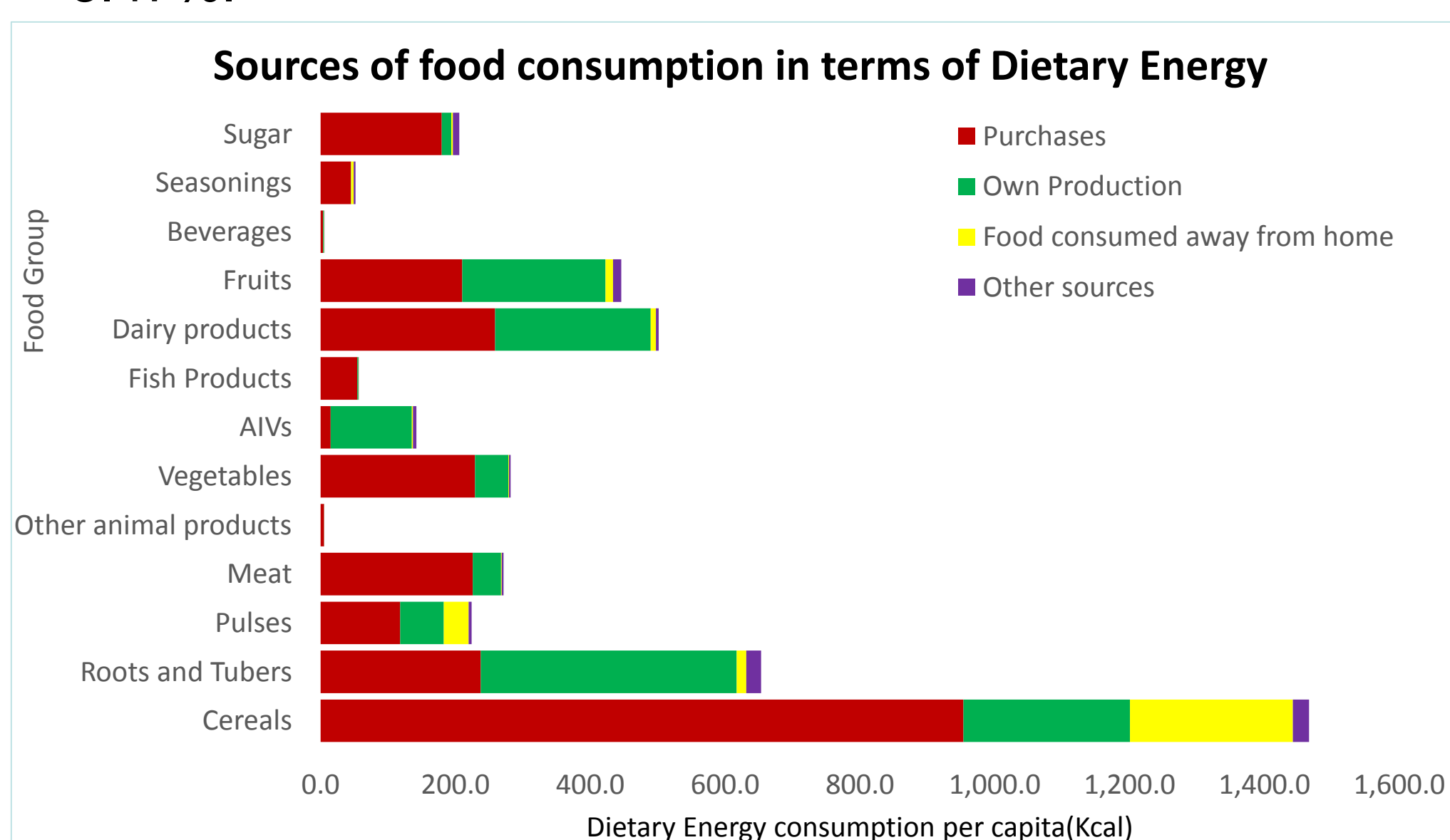
Food Security Framework



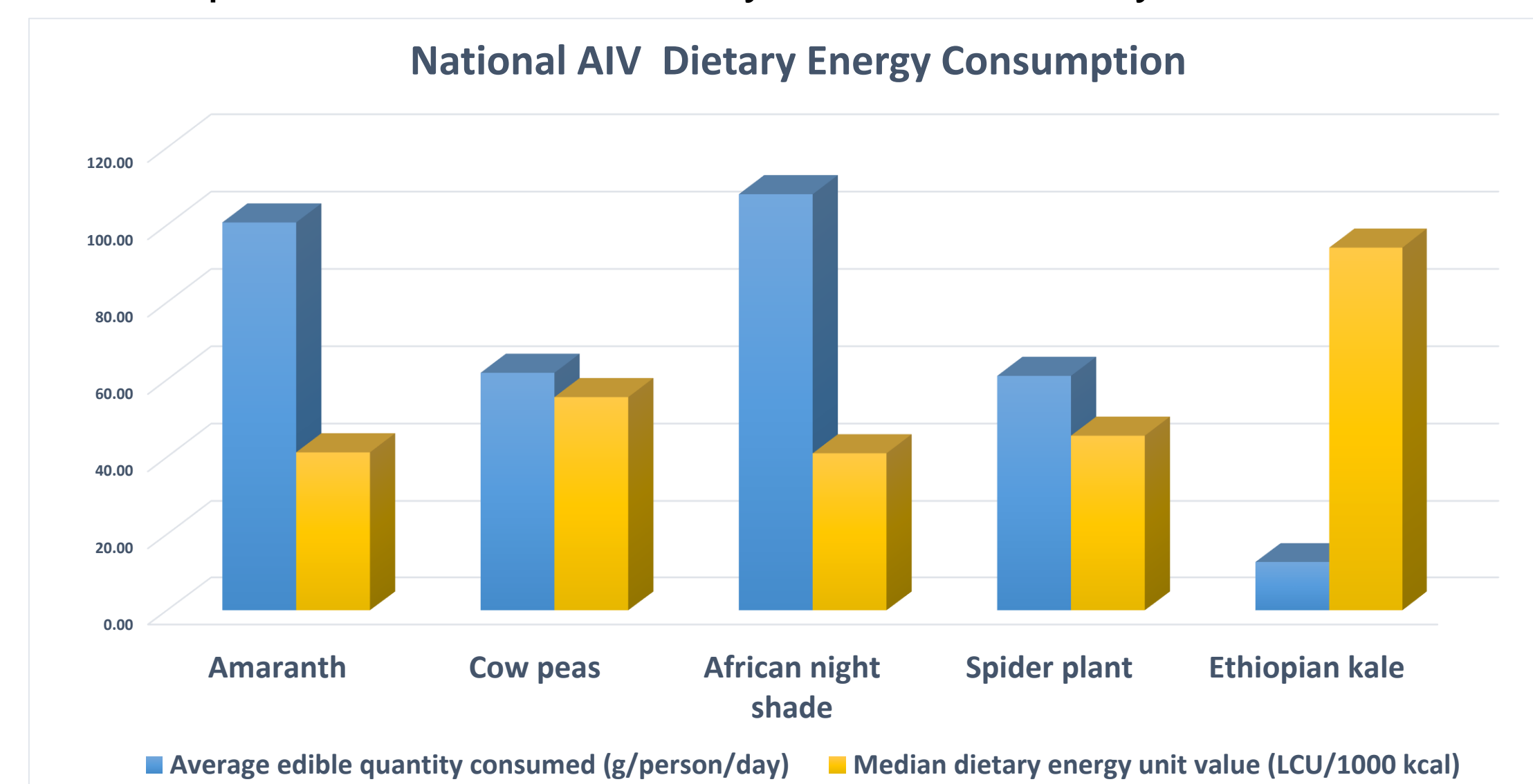
Results



- ❖ AIVs constitute about 3.3% of total energy consumption per food group with the urban being 1.37% and the rural being 3.47%.



- ❖ Main source of dietary energy from AIV in rural and urban areas is own production at 84.9%. Own production compliments food availability and accessibility.



- ❖ African night shade is the most consumed AIV with values of 97.94 and 111.90 g/person/day in the peri-urban and rural areas, respectively.

Energy consumption

- ❖ AIVs Contribute at least 8% of the energy RDA (Recommended Daily Allowance).
- ❖ They have an average median energy unit value of 55.5Ksh/1000Kcal.

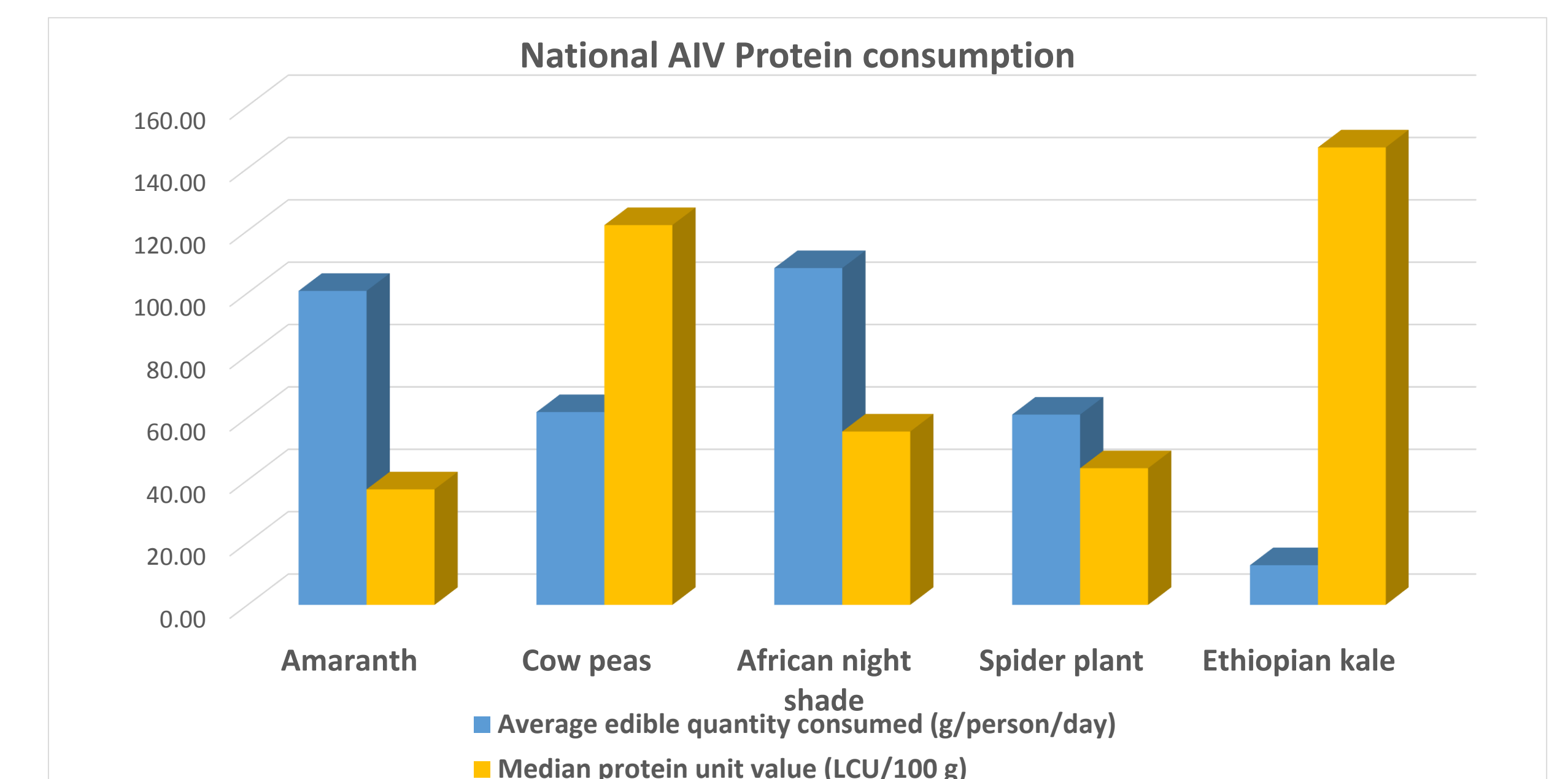
Protein Consumption

- ❖ AIVs Contribute 10.4% and 5.9% of the total Dietary Protein in Rural and Urban Areas, respectively
- ❖ Amaranth contributes 4.6g/person/day of dietary protein. Has a median protein unit value of 37Kshs/100g

Composition per 100g of edible portion of AIVs

AIV	Protein	Fiber	Fat	Moisture %	Carbohydrates
Amaranth	4.6	1.8	0.3	84	8.2
Cowpeas	4.7	3.8	0.3	86.9	5.5
African Night shade	4.3	2.0	1.0	87.2	5.7
Spider plant	4.2	1.3	5.2	86.6	3.0
Ethiopian Kale	1.9	2.0	0.4	91.2	3.6

Source N.P.Usiku et.,al 2010



Conclusion and Recommendations

- ❖ AIVs play a great role for the food security situation of poor rural and peri-urban households through provision of macronutrients such as protein and energy.
- ❖ This is especially important for farm households who require a lot of energy and calorie for agricultural activities.
- ❖ AIVs production enhances accessibility and availability of food.
- ❖ Therefore, diversifying diets by incorporating AIVs improves food security.
- ❖ However, more research needs to be conducted to analyze the contribution of AIVs in the provision of micronutrients.