

Food Security Analysis Based on The Proportion of Food Expenditure and Energy Consumption of Carrot Farm Households in Tawangmangu Karanganyar

A N Afifah, S Marwanti, and Agustono



ABSTRACT

Purpose: to analyzes the proportion of food expenditure (PFE), energy and protein consumption, and food security of carrot farm households in Tawangmangu, Karanganyar.

Number of respondent: 40 carrot farm households in Tawangmangu, Karanganyar.

Data analysis method: households' PFE, food consumption, and food security.

Results: The average PFE was 44%. The average consumption of energy and protein is 1,803 kcal/person/day and 58 grams/person/day. 62.5% of households classified food secure.

Conclusions: Most of the households achieved a good level of welfare. The food acquisition from farming can be used to increase farm households' food security.

INTRODUCTION

There are four dimensions of food security based on Undang-Undang No 18 of 2012, availability, access, utilization, and stability. The availability of rice in Karanganyar on 2015 is sufficient. But viewed from certain parts of the regency, some districts are experiencing a deficit, including Tawangmangu. The deficit lead to hampered food access. High food prices affect the households' food expenditure. Food security problems often occur in farmer households in rural areas that depended on nature condition. The low level of income affect the fulfillment of nutrition to determine food security.

METHODS

• PFE

$$PFE = \frac{PP}{TP} \times 100\%$$

Note:
PFE = proportion of food expenditure (%)
PP = household food expenditure (IDR/month)
TP = household total expenditure (IDR/month)

• Household Consumption

$$TKG = \frac{C}{AKG} \times 100\%$$

Note:
TKG = nutrient level intake (%)
C = consumption intake, energy (kcal), protein (gram)
AKG = Standard Indonesian Nutrient Sufficiency

• Food Security

Food secure: sufficient energy intake (>80% from AKE) and low PFE (<60% of total expenditure)

Food vulnerable: sufficient energy intake (>80% from AKE) and high PFE (≥60% of total expenditure)

Food less secure: not sufficient energy intake (≤80% from AKE) and low PFE (<60% of total expenditure)

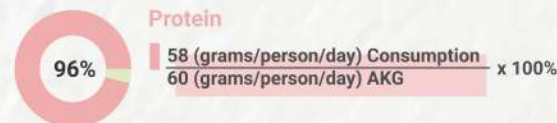
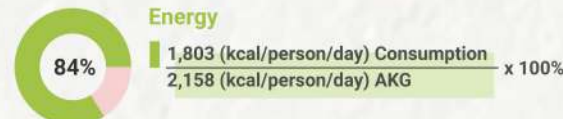
Food insecure: not sufficient energy intake (≤80% from AKE) and high PFE (≥60% of total expenditure)

RESULTS

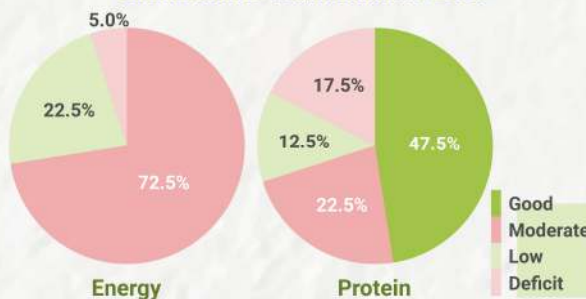
• Household PFE



• Household Consumption

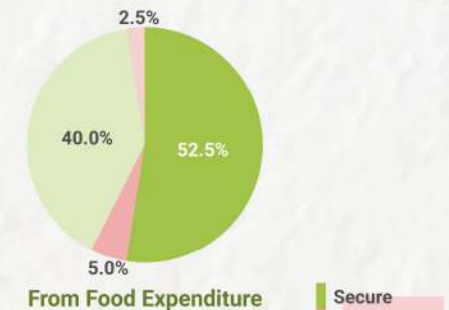


Distribution of Nutrition Intake Level



• Household Food Security

Distribution of Food Security (Based on PFE and Consumption)



CONCLUSION

This study concludes that the household PFE is 44%, showed that most of the households achieved a good level of welfare. The average household member consumes energy and protein of 1,803 kcal/person/day and 58 grams/person/day with a moderate level of consumption. In the food security analysis of 40 carrot farming households, 62.5% are food insecure, 5% are food vulnerable, 30% are food less secure, and 2.5% are food insecure. The food acquisition from farming can be used to increase farm households' food security, both by increasing consumption intake levels and contributing to household income.