



## Introduction and objective

- Homegardens contribute to household food security, nutritional status and ecological sustainability especially in developing countries.
- Most government, NGOs and development agencies recent initiatives seek to strengthen local capacity and improve homegarden to aid the global challenge of food production and food insecurity.
- However, little is known of homegardens commercialization and its effects on food security.

### Aim

- The main aim is to examine the contribution of homegarden commercialization to food security among smallholder householders in the Upper East Region of Ghana.

## Methodology

- Data obtained from 120 farmers
- Commercialization index used to categorize homegardens
- Food security analysed using Hfias score
- Ordered probit model to analyze the contribution of homegardens commercialization to food security



Fig. 1. Data collection – questionnaire survey with farmer at Bolgatanga

## Summary of Results

- The results (Figure 2) highlights the major constraints in homegardening; high initial capital of investment, destruction of animals and lack of agricultural support.
- Figure 3 reveals the major motivations for doing homegarden; to achieve food security and gain additional income.
- The results (Figure 4) shows that greater percentage of the homegardeners in the Upper East are food secured (52.50%). Only few of them fall into the severe food insecurity category (5.83%).
- The ordered probit model results shows that there is significant negative relationship between educational level of respondents, homegarden size, and homegarden commercialization and household food insecurity

## Results

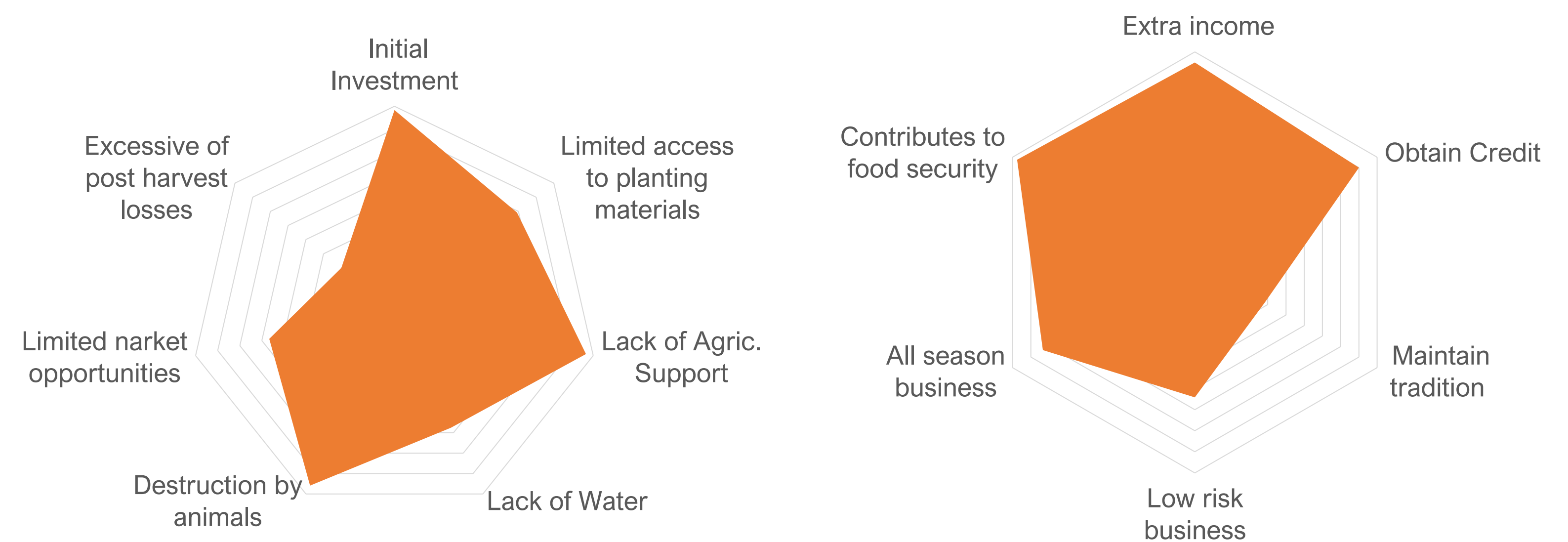


Figure 2. Constraints of homegarden. Note: 5-point ordinal scale with 5 as highest level of perception and 1 as lowest level of perception

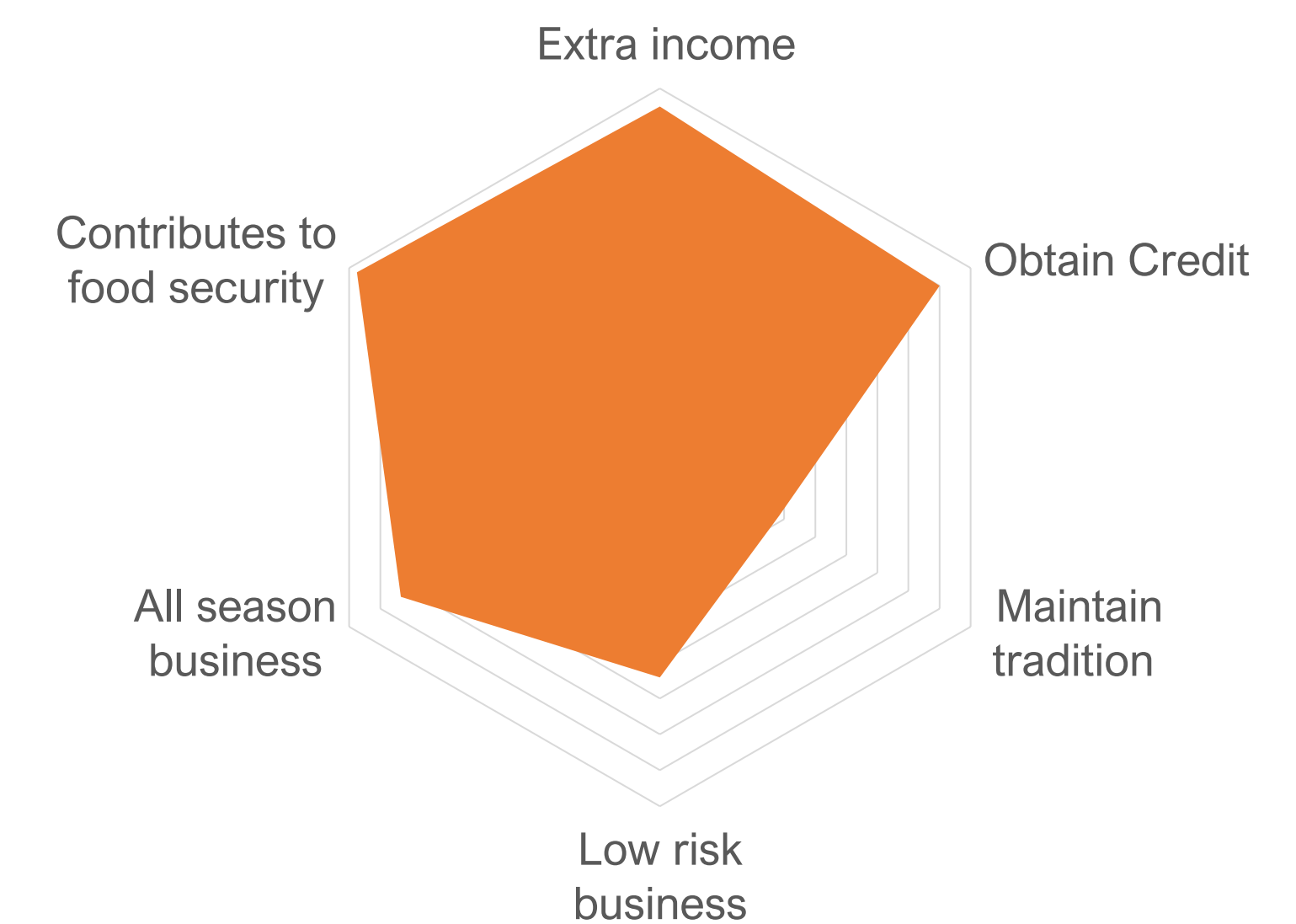


Figure 3. Motivation for doing homegarden. Note: 5-point ordinal scale with 5 as highest level of perception and 1 as lowest level of perception

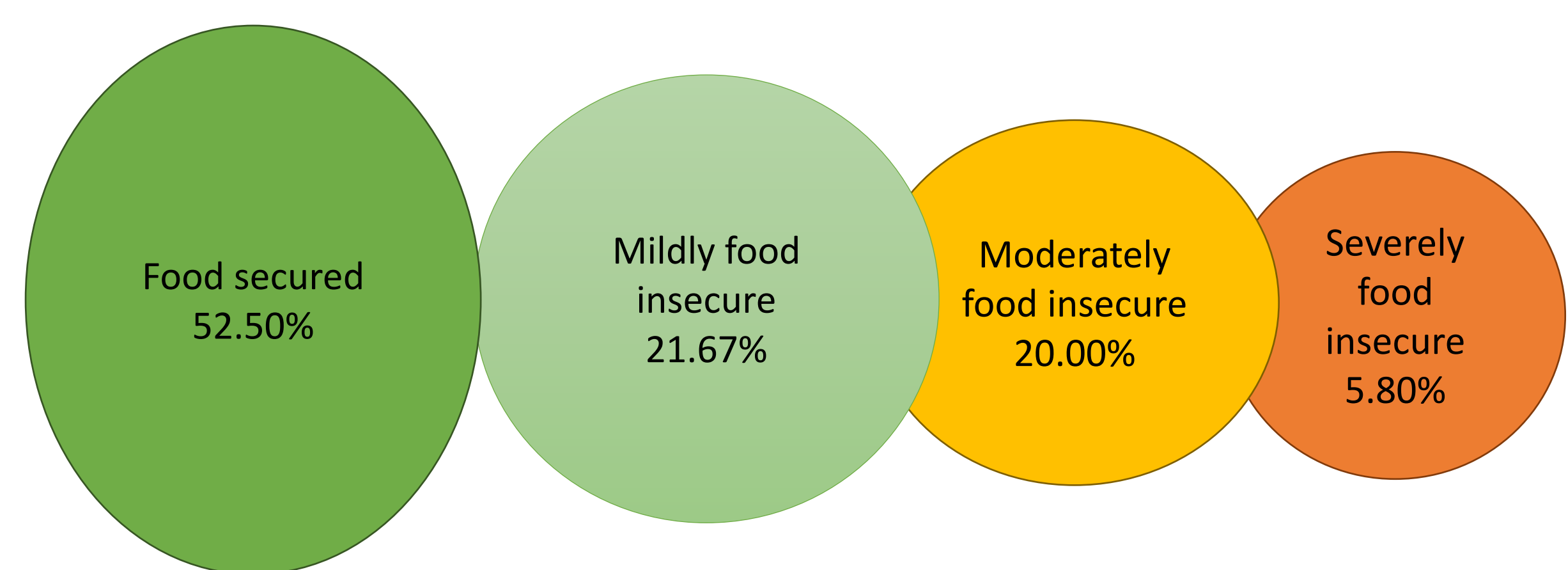


Figure 4. Food Security Situation of homegardeners

Table 1. Ordered probit model estimate of factors that influence food security

|                                | HFIAS            |
|--------------------------------|------------------|
| HH age (years)                 | .008 (0.011)     |
| HH gender (male= 1, female= 0) | .449 (0.305)     |
| Education (years)              | -.044 (0.027)**  |
| Household size                 | .019 (0.07)      |
| Home garden size ha            | -.297 (0.156)*   |
| Distance from house (km)       | -.091 (0.084)    |
| Group membership (yes=1, no=0) | 1.04 (0.664)     |
| Credit Access (yes=1, no= 0)   | 1.064 (1.079)    |
| Project beneficiary            | -.148 (0.933)    |
| Homegarden commercialization   | -.299 (0.083)*** |
| cut1                           | -.389 (0.517)    |
| cut2                           | .32 (0.515)      |
| cut3                           | 1.42 (0.543)     |
| Prob > chi2                    | 0.000            |
| Pseudo r-squared               | 0.213            |
| Chi-square (10)                | 35.43            |
| Number of obs.                 | 120              |

\*\*\* p<.01, \*\* p<.05, \* p<.1

## Conclusion

- Homegardens play an important role in terms of food security and gaining additional income
- Homegarden commercialization, education and homegarden size significantly affect household food and cash security
- Homegardens should be supported in agriculture and rural development policies.