

Introduction

- Crop production systems in Eastern Uganda have experienced changes due to increasing population densities and declining farm sizes.
- Therefore, small scale farmers have to choose between available production practices.
- Farmers objectives and their links to agroecology practices were explored to assess the importance of individual objectives in crop production decisions.

Materials and methods

- Focus group discussions - elicit farmers objectives
- Paired comparisons - analyze farmers objectives.
- Ranking exercises - identify objective preferences
- Multi-criteria approach

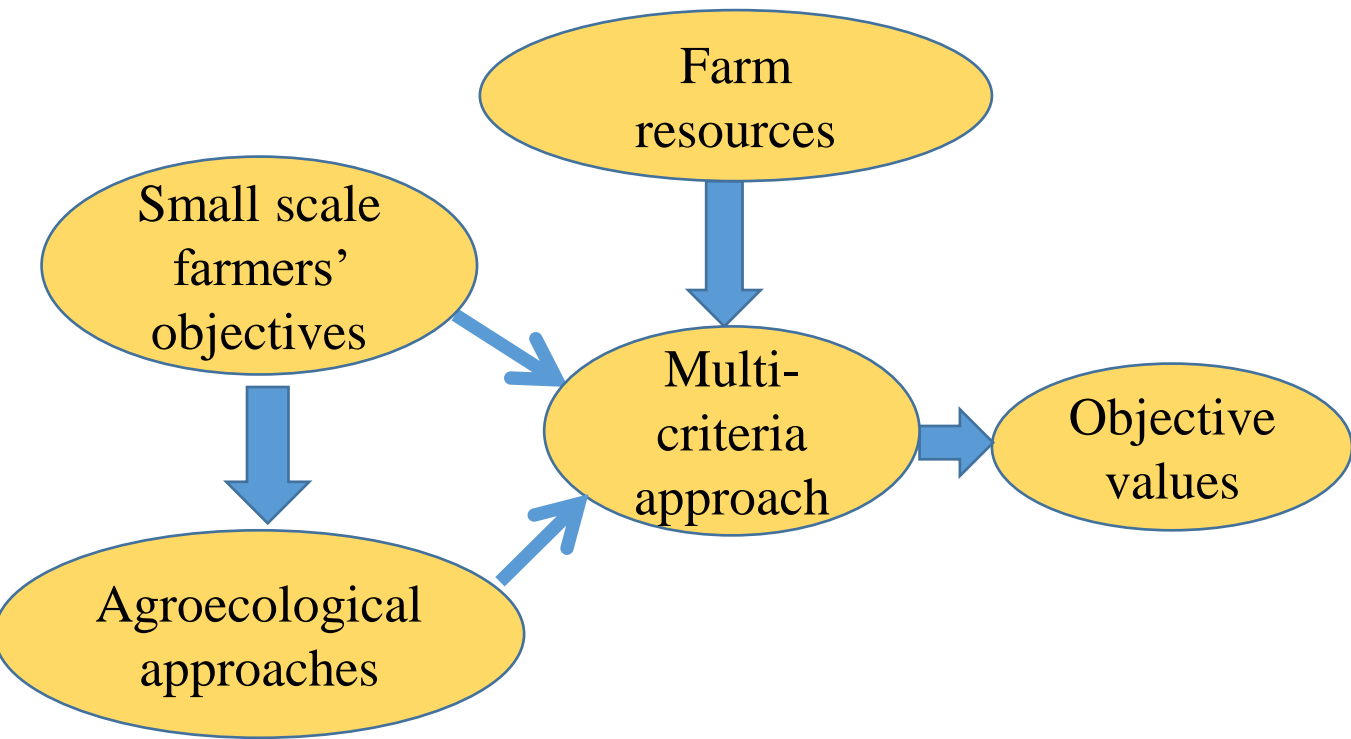


Fig.1: Linkage between farm objectives and farm practices



Fig.2: Mixed cropping systems

Conclusions

- Farmers consider their objectives during crop production decision making processes
- Agroecological approaches through mixed-crop systems increase crop productivity and cash income
- These approaches promote better food and nutrition security

Results

- Three important objectives identified; nutrition security, cash income and leisure
- Higher values for the objectives were realized from the mixed-crop systems compared to the sole cropping systems
- Crop mixtures of maize and beans promoted better nutrition compared to sole cropped maize and beans, if the farm’s objective was to maximize nutrition



Fig.3: Farmers’ achievement of their objectives

Table 1: Pay-off matrix for farmers’ objectives in the different cropping systems

	Objective function		
	Maximise income	Maximise nutrition	Maximise leisure
Mixed cropping system			
Maximise income	<u>420</u>	116	9847
Maximise nutrition	80.8	<u>120</u>	9779
Maximise leisure	80.8	111	<u>9899</u>
Sole cropping system			
Maximise income	<u>386</u>	109	9854
Maximise nutrition	80.8	<u>116</u>	9850
Maximise leisure	80.8	111	<u>9895</u>

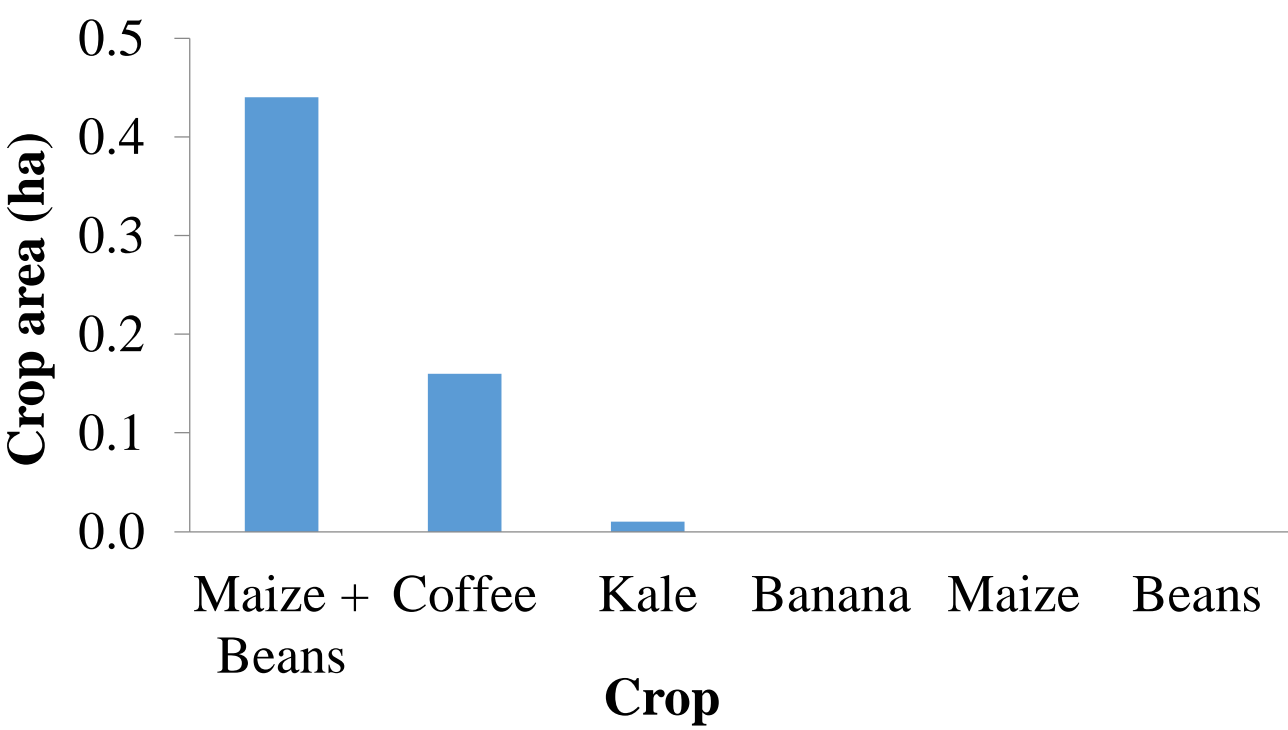


Fig.4: Crop area allocation in maximising household nutrition