

# What should rural households grow and eat to improve their nutrition?

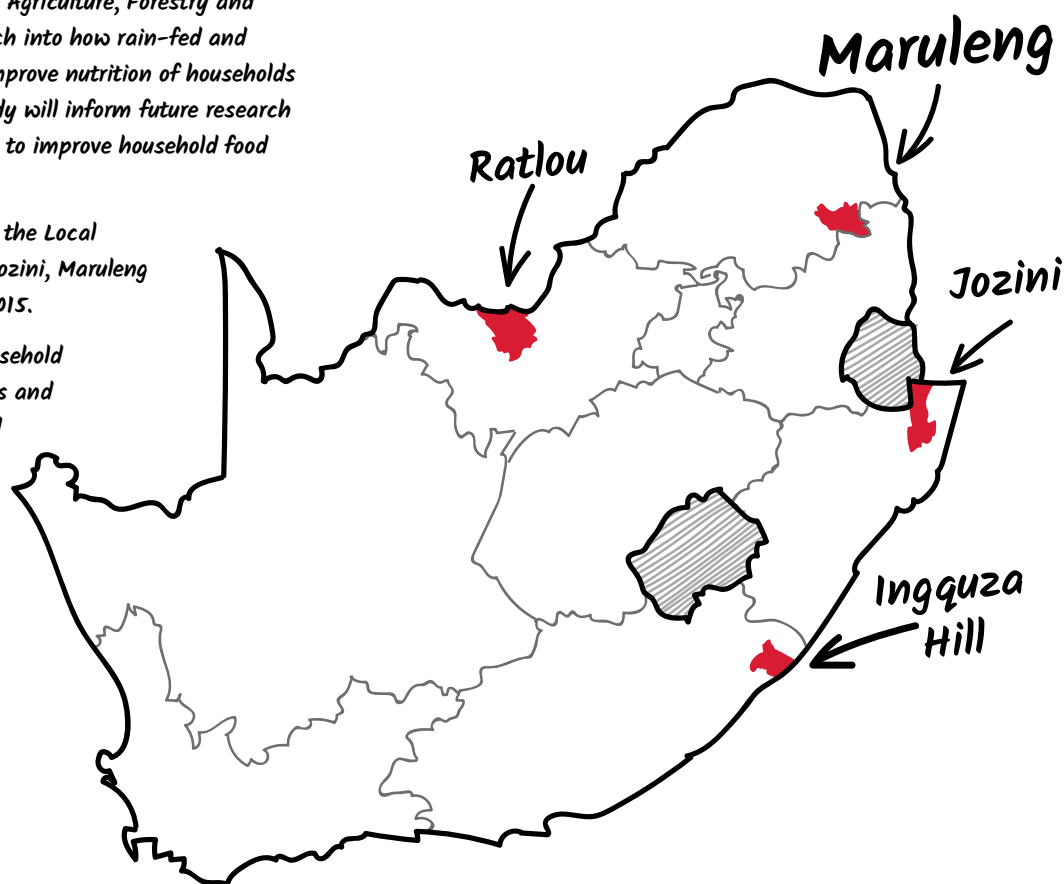


*Over the past three years, the University of Pretoria has been conducting a research project commissioned by the Water Research Commission of South Africa.*

*The study set out to understand what people in rural households in South Africa grow and eat in order to make recommendations to WRC and the Department for Agriculture, Forestry and Fisheries to plan further research into how rain-fed and irrigated crop production can improve nutrition of households in these communities. This study will inform future research studies on water efficient crops to improve household food security and nutrition.*

*The research was carried out in the Local Municipalities of Ingquza Hill, Jozini, Maruleng and Ratlou between 2013 and 2015.*

*The survey team conducted household surveys, focus group discussions and interviews, in both summer and winter. The final stage of the project is to present the findings to members of the communities to get feedback on the accuracy of the findings and suitability of our recommendations.*



**Institute for Food,  
Nutrition and Well-being**



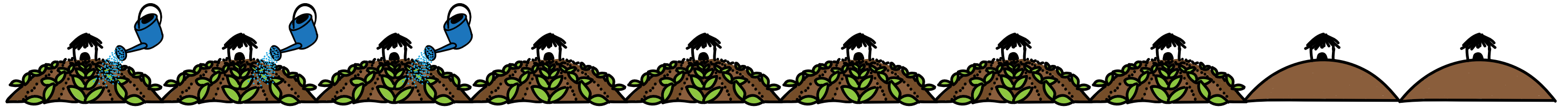
**agriculture,  
forestry & fisheries**

Department:  
Agriculture, Forestry and Fisheries  
REPUBLIC OF SOUTH AFRICA

This paper is based on research conducted by the University of Pretoria's Institute for Food, Nutrition and Well-being and was supported by the Water Research Commission (WRC No K5/2172/4) project entitled: *Current rain-fed and irrigated production of food crops and its potential to meet all year round nutritional requirements of rural poor people in North West, Limpopo, KwaZulu-Natal and Eastern Cape Provinces.*

For more information, please contact Prof Sheryl Hendriks at [sheryl.hendriks@up.ac.za](mailto:sheryl.hendriks@up.ac.za).

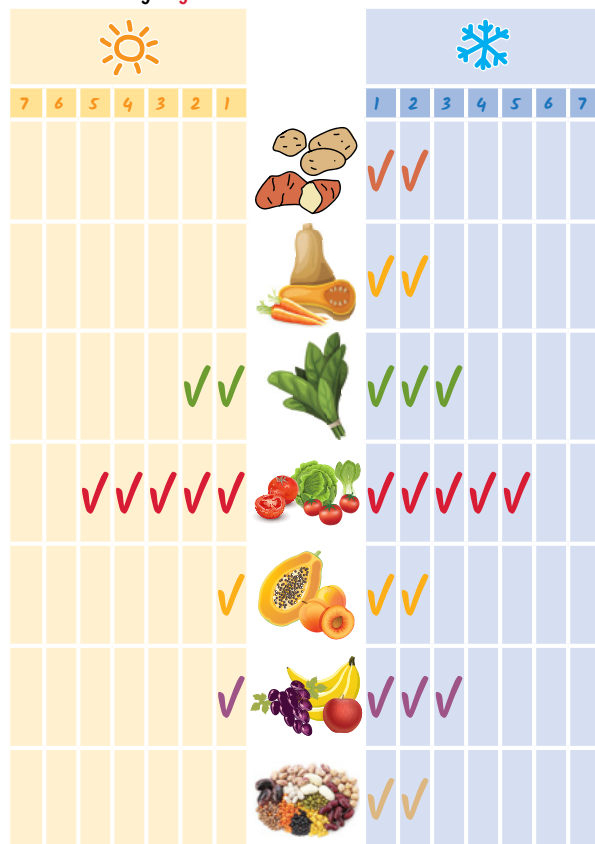
## What we've found...



Our research shows that **8 out of 10** households in Maruleng **grow crops** on open plots or in household, community or school gardens, **3 of these** were irrigated.

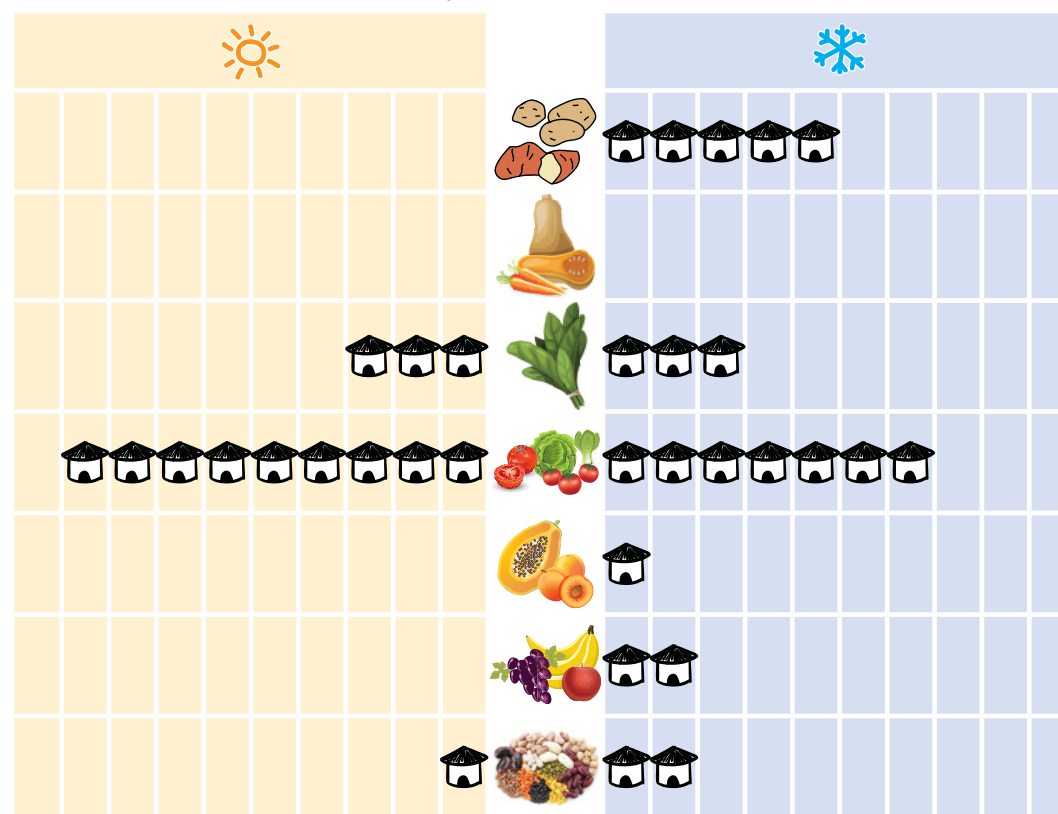
We found that all households ate purchased maize every day. Very few households eat diverse diets or eat foods from the following food groups every day.

How many **days a week** do households eat **diverse foods**?



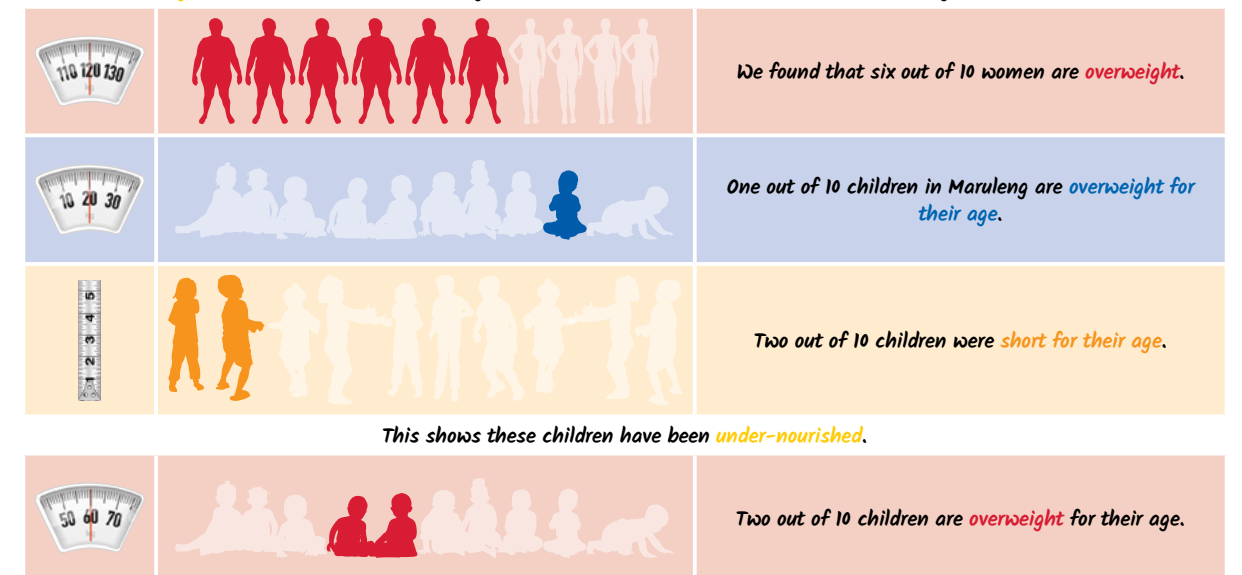
Most households in Maruleng ate foods from 5 food groups each week. It is recommended that people eat foods from as many groups as possible everyday to ensure good nutrition. The results show that diets in this community are not very diverse.

How many **households** eat **diverse foods**?



## Key messages...

We **weighed and measured** female care-givers and children between 24 and 59 months of age at each household.



This shows that these children are **not eating balanced and healthy diets**.

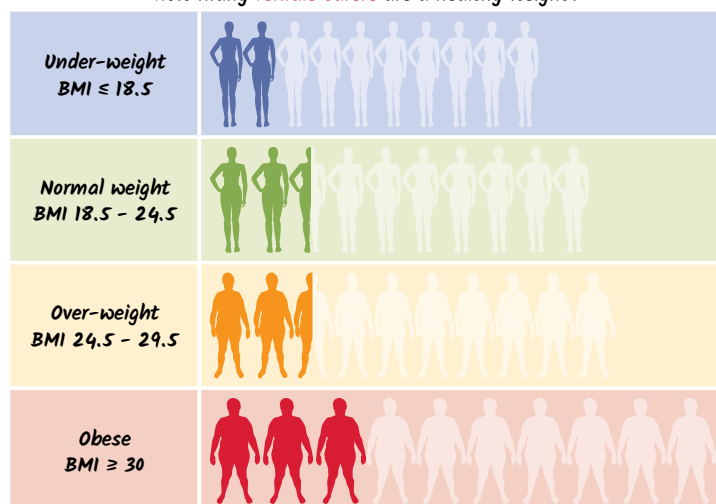
We found that households that grow crops eat fresh vegetables and fruits more often than those who do not grow crops. They also eat more eggs and fish than households that do not grow crops.

We also found that households that irrigate enjoy a more diverse diet, eating fresh vegetables and fruits more often than those who do not irrigate their crops. They also eat more meat, eggs, fish and dairy products than households that do not grow crops or irrigate.

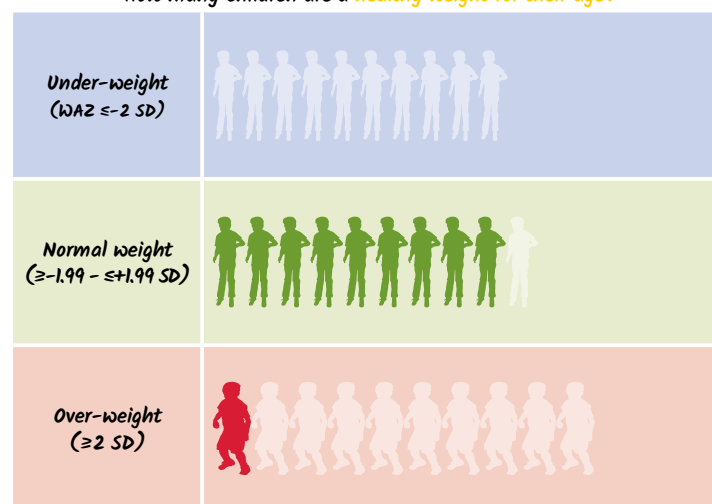
Improvements in the diets of all household members is necessary for improved nutrition, health and productivity.



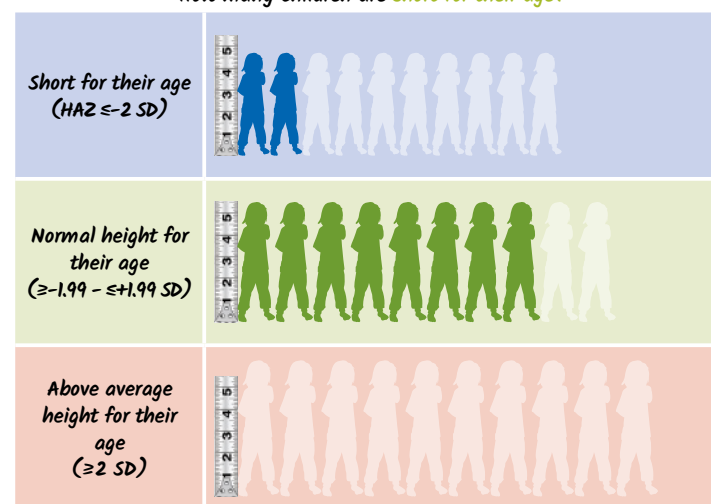
How many **female carers** are a healthy weight?



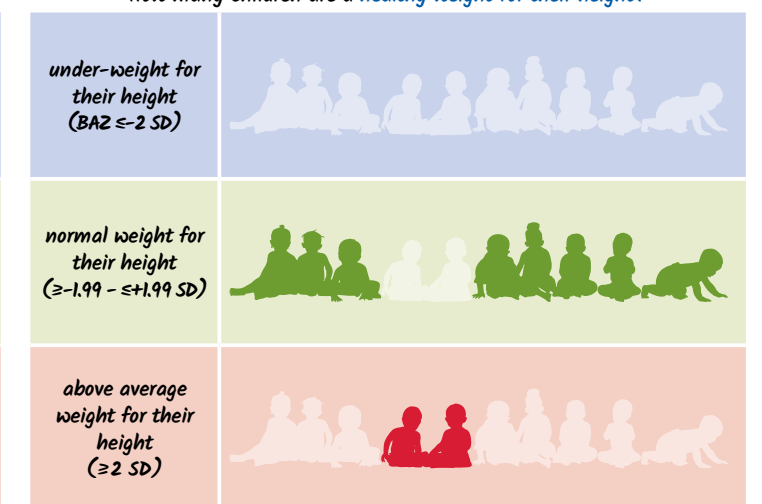
How many children are a **healthy weight** for their age?



How many children are **short** for their age?



How many children are a **healthy weight** for their height?






































# What we recommend...








































Eating a variety of vegetables and fruits regularly ensures the intake of a variety of nutrients required for maintaining health bodies and minds. Diversified diets help children grow and develop optimally.

Diets can be improved by including the following foods or increasing the number of times in a week these foods are consumed. Growing these foods for home consumption will improve the diets of small children and adults.

The crops in the table below are able to grow in Maruleng.

Food group	Crop	Can provide food:	Supplemental irrigation needed
 White roots and tubers	Amadumbe		
	Potato	 	
	Sweet potato		
 Orange-flesh vegetables	Beetroot	 	
	Tomato		
	Carrots	 	
	Pumpkin/ Butternut		
	Gem squash		
	Orange-fleshed sweet potato		
	Hubbard squash		
	Pumpkin		
 Dark green leafy vegetables	Broccoli	 	
	African leafy vegetables	 	
	Swiss Chard	 	
	Beetroot leaves	 	
	Pumpkin leaves		
	Cowpea and legume leaves		

 = Can provide food in summer  
 = Can provide food in winter  
 = Supplemental irrigation needed

Food group	Crop	Can provide food:	Supplemental irrigation needed
 Other vegetables	Cauliflower	 	
	Cabbage	 	
	Lettuce	 	
	Cucumber		
	Eggplant		
	Green beans		
	Green pepper		
	Peas	 	
	Zucchini		
	Onion	 	
 Orange-coloured fruit	Mango		
	Papaya		
	Spanspek		
	Watermelon		
 Other fruit	Avocado		
	Banana		
	Figs		
	Loquat		
	Pineapple		
 Legumes	Bambara groundnut	 and when dried all year	
	Cow peas	 and when dried all year	
	Broadbeans	 and when dried all year	
	Harricot beans	 and when dried all year	
	Sugar Beans	 and when dried all year	
	Groundnut	 and when dried all year	

The research team thanks the the community for their participation in this project and the team of fieldworkers for their hard work in collecting the data.

LIMA Rural Development Foundation and staff are thanked for facilitation of the fieldwork and most appreciated.

The National Research Foundation funding is also acknowledged from Grant numbers CPR20110706000020, 77053 and 80529.

To cite this work: Hendriks, S.L., et al (2016). *What should rural households grow and eat to improve their nutrition?* Maruleng. Research brief. Commission (WRC Project No. Project K5/2172/4). Copyright: The Water Research Commission and University of Pretoria, Pretoria.

Design and layout by Marguerite Hartzenberg of Active Space Designs – marguerite.activespace@gmail.com.