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# Enhancing sustainable food and nutrition security by exploiting underutilized crops/plants

By

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## Presentation Outline



Background



Challenges to enhance food and nutrition security



The available opportunities

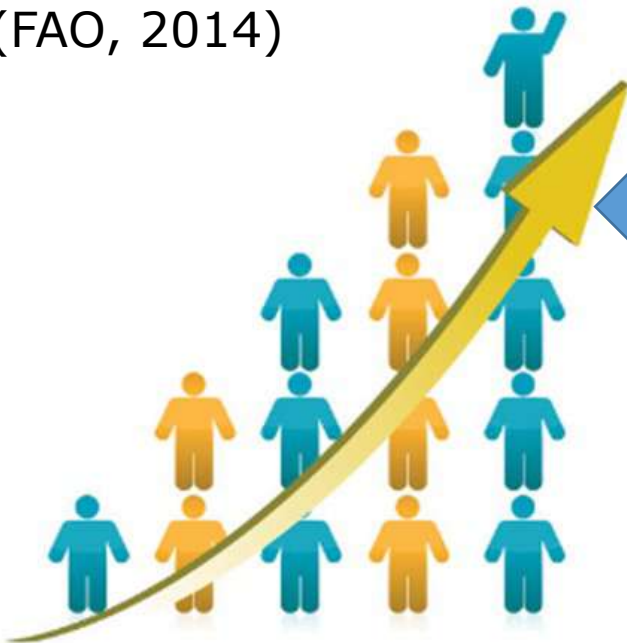


Some findings



Conclusions

Ethiopia's population is expected to reach 200 million by the end of 2050 (FAO, 2014)



To balance supply and demand

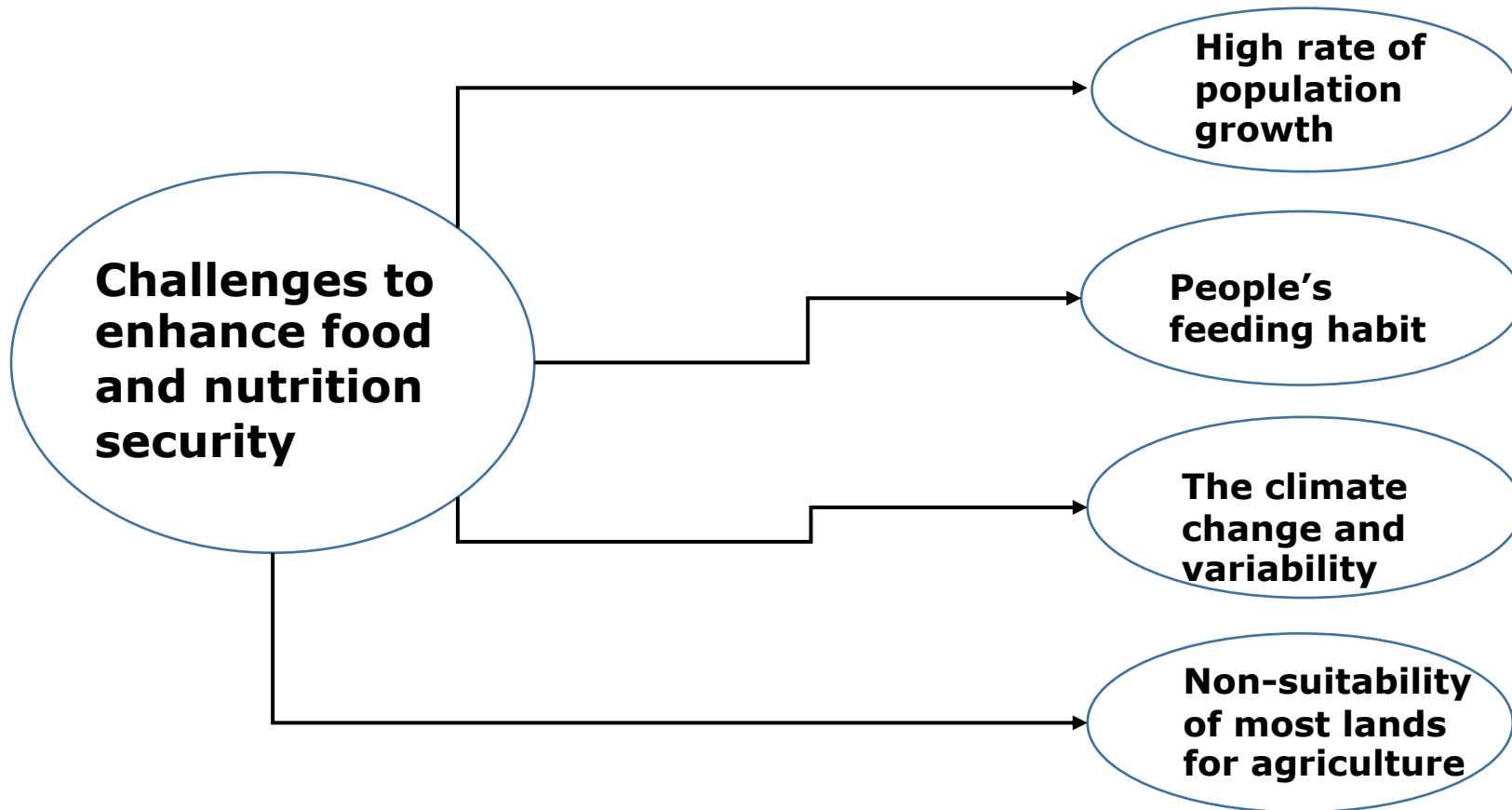


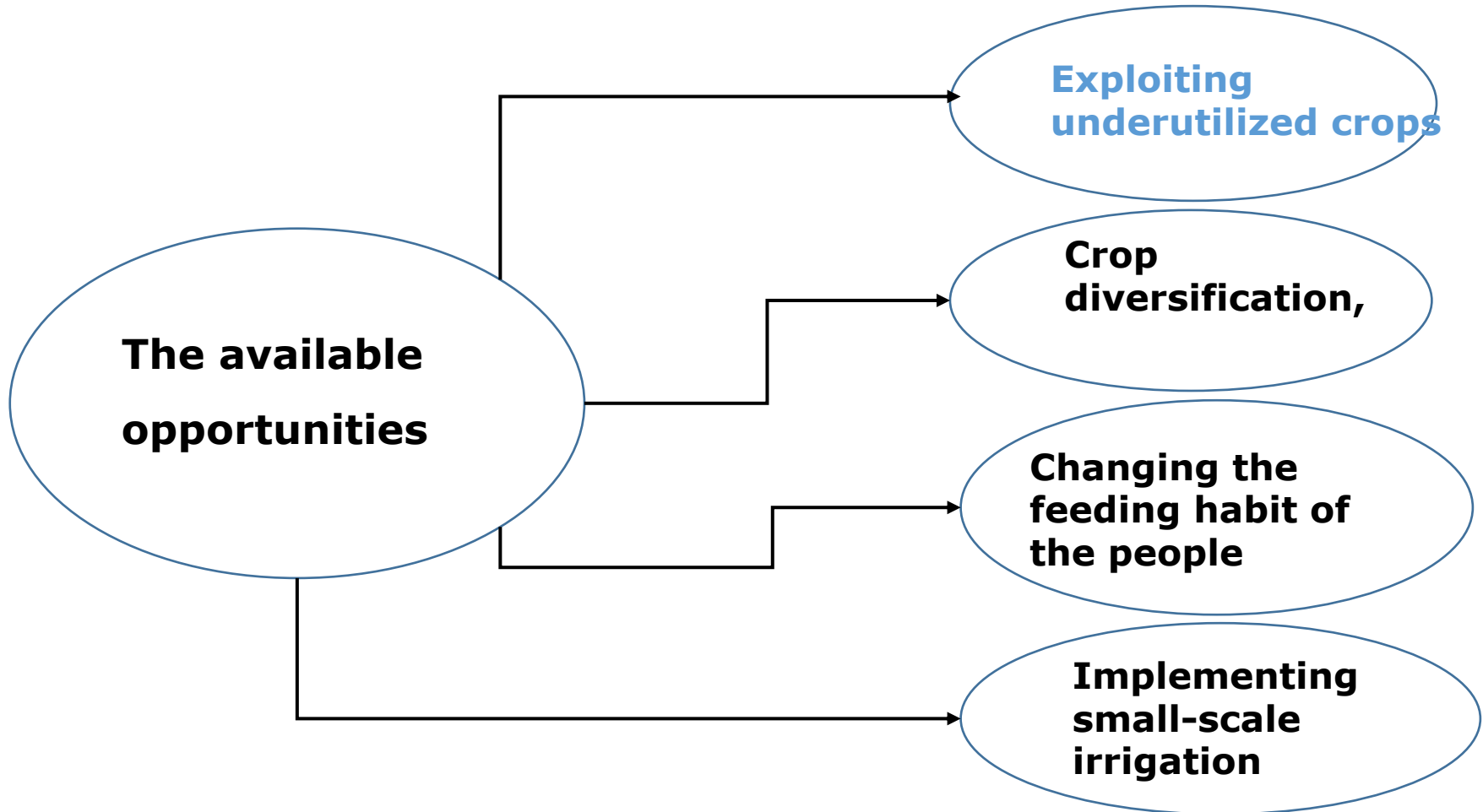
Agricultural production must increase





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- Most rural people in Ethiopia is food insecure and malnourished
  - Their diets are mostly depended on cereals (low minerals)
  - Compensation is must to minimize the problem
  - The situations aggravated by different natural and manmade factors
  - The country has many opportunities to improve food and nutrition insecurity for its people





Scientific names	Local names	Places it founds	Parts to be used	Benefits	References
Ensete ventricosum, Musaceae	Enset	South and southwest	Tuber and root	High carbohydrate and minerals content, such as calcium, potassium and zinc	(Borrell et al., 2019; Wondimu & Kebede, 2022)
Dioscorea	Yam (Yehareg boye)	South and southwest	Tuber	A great source of fiber, protein, potassium, manganese, copper, and antioxidants. May boost brain health, reduce inflammation, and improve blood sugar control.	(Andualem, 2022; Padhan & Panda, 2020)
Manihot esculenta	Cassava (Yeinchet boye)	Southern	Tuber	A good source of resistant starch, which helps with blood sugar control and digestive health. Additionally, it contains vitamin C, an essential element that might improve collagen formation and immunological function.	(Feyisa, 2021; Kyamanywa et al., 2011)
Colocasia esculenta	Taro (Godarre)	South and southwest	Tuber	A great source of dietary fiber and good carbohydrates, both of which help the digestive system work better and can aid in weight loss. Its high vitamin C, B6, and E content may also assist to reduce free radicals and promote a healthy immune system.	(Temesgen & Retta, 2015)
Ipomoea batatas	Sweet potato (Sikuar dinch)	In all regions	Tuber	A vegetable with excellent nutritional content that is also incredibly adaptable and delicious. It is also a highly useful medical herb with anti-inflammatory, anti-cancer, and anti-diabetic properties.	(Girard et al., 2021; Kyamanywa et al., 2011)
Agaricus bisporus	Mushroom (Engudday )	In all regions	Tuber	It contains proteins, carbohydrates, minerals, fibres and vitamins and may be used as protein supplementary diet	(Emiru et al., 2016; Teklit, 2015)



# Exploiting underutilized crops

Scientific names	Local names	Places it founs	Parts to be used	Benefits	References
Cucurbita	Cucumber (Dubba)	In all region	Fruit	Highly nutritious and particularly rich in vitamin a, high antioxidant content may reduce your risk of chronic diseases,	(Hunde, 2017; Mintesnot, 2016)
Moringa oleifera	Shiferaw	Southern	Leaf	It is a rich in carbohydrate, protein, fat, dietary fiber, rich in minerals such as Calcium, Iron, Magnesium, Manganase, Phosphorus, Potassium, Sodium and Zinc	(Abbas et al., 2018; González-Burgos et al., 2021; Seifu, 2015)
Amaranthus	Amaranth (Suff)	Southern	Grain	Rich in antioxidants, including gallic acid and vanillic acid. Antioxidants help fight free radicals, which are damaging byproducts of normal cellular activity, helping to reduce everything from signs of aging to heart disease.	(Amare et al., 2016; Orsango et al., 2020)
Tamarindus indica	Tamarind (Yeinchet korri)	North and South	Seeds	It is a rich source of most of the essential amino acids, vitamins, minerals and phytochemicals, and possess antidiabetic, antimicrobial, antivenomic, antioxidant, antimalarial, cardioprotective, hepatoprotective.	(Chimsah et al., 2020; Kuru, 2014; Tebkew et al., 2014)
Ximenea Americana	Inkoye	In arid and semi-arid	Fruit	The fruits were used for food while roots and other parts of the species were used for medicine and source of income	(Feyssa et al., 2012; Tebkew et al., 2014)

**Ximenia Americana  
(Inkoye)**





- The plants are not well introduced and known in all regions of the country
- Domestication of these plants required through research
- These wild plants are important as a food supplement, means of survival during drought periods, as medicine
- Policymakers should emphasize the usage of underutilized crops/plants

A photograph of a cassava field with rows of green plants growing in a field.

Thank you  
very much

Vielen Dank

A photograph of a path through a cassava field, showing the large, green leaves and thick stems of the plants.

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