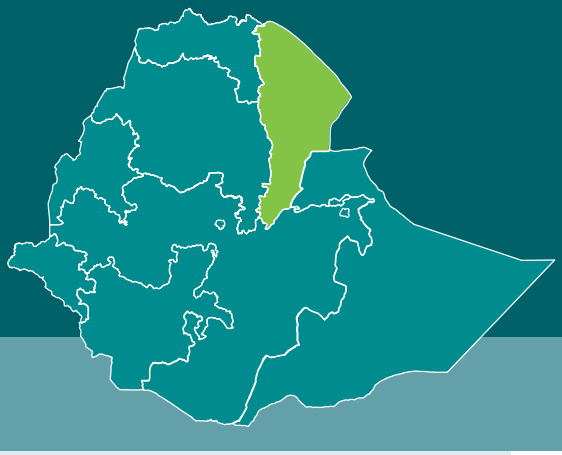


AFAR REGION

Making agriculture nutrition-sensitive

Findings from a study of consumption, production, availability, and affordability of nutritious food

Poor dietary quality is one of the leading causes of premature death and diseases globally.[1] Typically proxied by the diversity of one's diet, dietary quality is a challenge in Ethiopia where household consumption tends to be monotonous. According to the Ethiopian Public Health Institute, adults and children throughout the country get between 60-80 percent of their energy from carbohydrates.[2] This is particularly worrying for Ethiopia given that a carbohydrate intake greater than 60 percent increases an individual's risk of cardiovascular disease—one of the country's most common causes of premature mortality.[3] Micronutrient deficiencies and stunting are another indication of limited dietary quality. Across Ethiopia, 60 percent of children are anemic, one-third are deficient in Vitamin A, and only 14 percent of children meet the World Health Organization's (WHO) standard for diet diversity.[4,5] In an effort to improve dietary quality, the Government of Ethiopia has set out ambitious plans through the National Nutrition Programme to increase the year-round availability, access, and consumption of nutritious foods.[6] At the core of these efforts is the urgent need to transform food systems to support healthier diets throughout Ethiopia.[7]

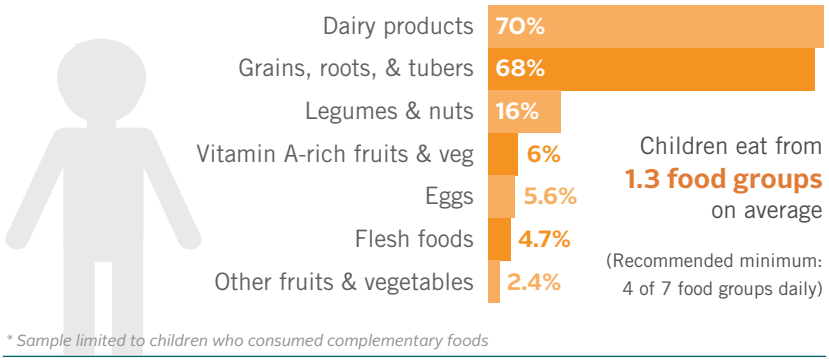
ABOUT THE STUDY

This brief summarizing Hirvonen and Wolle's 2019 report, *Consumption, Production, Market Access and Affordability of Nutritious Foods in the Afar Region of Ethiopia*, offers insight into the gaps and opportunities where nutrition-sensitive agriculture policies and programs could have the greatest impact on diet diversity.[8]

CONSUMPTION IN AFAR

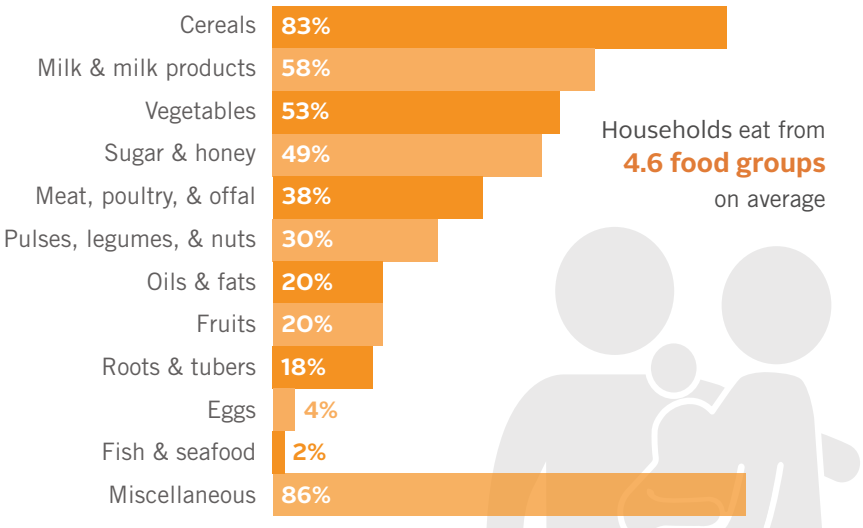
The study looks at consumption among children 6-23 months and households within Afar. (Data on women's and mother's diets are not available for the region.) Children in Afar primarily consume dairy products and starchy staples, falling far below the recommendations for diet diversity. Only 2 percent of children meet the WHO's minimum standard that suggests children eat from at least 4 of 7 food groups daily. Meanwhile, the average household where the Productive Safety Net Program (PSNP) operates only consumes from 4.6 out of the total 12 food groups. The graphs below show the percentage of children and households that consume the different food groups.

CHILDREN 6-23 MONTHS (DEMOGRAPHIC & HEALTH SURVEY, 2016*)



** Sample limited to children who consumed complementary foods*

HOUSEHOLDS (PSNP SURVEY, 2018)



Note: The list of food groups used to construct the Household Dietary Diversity Score is not meant to measure the nutritional quality of an individual's diet. It is included above to present an overall picture of diets in Afar. Miscellaneous foods include other foods such as condiments, coffee, and tea.

PRODUCTION AND AVAILABILITY IN AFAR

Crop production in Afar is low and rainfall patterns are relatively erratic. Energy production in the region declined by 6 percent between 2012 and 2015, driven by fluctuations in the production of grains, roots, and tubers. These staples accounted for 64 percent of all calories produced in 2015. Dairy products accounted for 35 percent of total calorie production in the same year, and the remaining six food groups account for only about one percent of total calories produced in the region. The market availability of nutritious foods found in Afar is shown at right. A limited variety of different food items are available in Afar markets. Apart from starchy staples, some of the more common items are:

- Lentil and fenugreek
- Goat and egg
- Carrot, mango, and banana
- Tomato, onion, and green pepper

ENERGY PRODUCTION PER CAPITA, PER DAY

(2015 KILOCALORIES)

Grains, roots, and tubers:
427 KILOCALORIES

All other food groups combined:
239 KILOCALORIES

Grains, roots, and tubers	427
Dairy products	233
Poultry, fish, and meat	6
Eggs	0.3
Legumes and nuts	0
Vitamin A-rich fruits and veg	0
Other fruits and vegetables	0
Other foods	0
TOTAL	**666**

Calculations from Central Statistical Agency (CSA) agricultural sample surveys

AVAILABILITY OF NUTRITIOUS FOOD IN LOCAL MARKETS

FOOD GROUP AND ITEM		PSNP (%)
Beans and peas	Lentil	72
	Chickpea	56
	Horse bean	47
	Bean, white	17
	Green bean	8
	Bean, brown	0
	Cowpea	0
Nuts and seeds	Fenugreek	64
	Groundnut	53
	Vetch	17
	Sesame	14
	Groundnut flour	0
Dairy	Powdered milk	36
	Fresh milk	28
	Yoghurt	25
	Cheese	6
Flesh foods	Goat	69
	Mutton	22
	Chicken	22
	Beef	19
	Fresh fish	6
	Camel meat	6
	Dried fish	0
Eggs	Eggs	83
Vitamin A-rich dark green leafy vegetables	Spinach	56
	Ethiopian Kale	47
Other Vitamin A-rich fruits and vegetables	Carrot	72
	Mango	72
	Papaya	47
Other vegetables	Tomato	100
	Onion	94
	Green pepper	67
	Lettuce	56
	Mushroom	3
	Cauliflower	0
Other fruits	Banana	83
	Orange	0
	Cactus fruit	0

From 2018 survey of PSNP areas

KEY TAKEAWAYS

- Overall, Afar does not produce enough food to feed its population due to lack of rainfall and absence of irrigation, making the region a net food importer.
- Markets have limited availability of foods, providing a constraint to diverse food consumption.
- Food production needs to significantly improve in the region, and in addition to staple crops, emphasis should also be on diversification to include non-staples that support health and nutrition.

AFFORDABILITY IN AFAR

In this analysis, affordability is defined as the share of total income needed to consume the recommended daily amount of the food group. Since Ethiopia is still developing its own nutritional guidelines, the analysis below is based on the EAT-Lancet Commission on Food, Planet, and Health guidelines* that recommend diets rich in plant-based foods based on the needs of a healthy individual.[9] The analysis below calculates the minimum cost to meet the dietary recommendation using the cheapest food item available for each food group to provide a sense of the price of foods relative to household incomes in the region. The seven food groups used in the child dietary diversity measure were used, with the omission of grains, roots, and tubers.

*Children under 2 years and pregnant and lactating women have different dietary requirements

PERCENT OF HOUSEHOLD INCOME NEEDED TO MEET THE RECOMMENDED INTAKE

(FOR HEALTHY INDIVIDUALS 2 YEARS OR OLDER)

FOOD GROUP	ANNUAL HOUSEHOLD INCOME			
	Average *(Birr 8,992)*	Poorest *(Birr 4,498)*	Median *(Birr 8,887)*	Richest *(Birr 24,328)*
Legumes and nuts	6%	11%	6%	2%
Dairy products	18%	35%	18%	7%
Poultry, fish, and meat	34%	68%	34%	13%
Eggs	5%	10%	5%	2%
Vitamin A-rich fruits & vegetables	6%	11%	6%	2%
Other fruits and vegetables	12%	24%	12%	4%
TOTAL	**81%**	**159%**	**81%**	**30%**

Income is proxied by consumption-expenditures from the 2015/16 Ethiopian Household Consumption-Expenditure (HCE) Survey from CSA

KEY TAKEAWAYS

- The poorest households in Afar cannot afford the recommended intakes for the six food groups because it would require 159% of their household income, and this excludes income needed to purchase food in the grains, roots, and tubers food group. Even the richest would need to spend 30% of their income on the six food groups.
- Dairy consumption and production are high, mainly from household production or barter with neighbors, not through markets. Meanwhile, flesh meat products are not affordable for most households.
- Among the animal source foods, eggs are relatively affordable.
- One way to diversify diets is to promote the consumption of legumes and nuts, eggs, and fruits and vegetables, which are currently lacking in diets but are relatively affordable to most income groups.

SUMMARY

Consumption

The diets of mothers and children in Afar currently lack adequate diversity to meet nutritional needs.

Production

Food production in the region does not meet caloric needs. It needs to include a variety of nutritious foods, in addition to staples, that would support a diverse diet.

Availability

A limited number of nutritious foods are available in markets, suggesting an opportunity to diversify markets and boost production of the most acceptable and affordable items.

Affordability

Plant-based foods and eggs are relatively affordable, while flesh foods are likely to be unaffordable for many households to consume regularly.

CONCLUSION

The most readily available and affordable food groups in Afar that are lacking in diets include: legumes and nuts; eggs; Vitamin A-rich fruits and vegetables; and other fruits and vegetables. Making these sub-sectors or value chains a priority—by increasing availability and improving affordability, price stability, and safety in all local food markets—offers promise for moving toward a more diverse diet, when combined with increasing demand for these foods.

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