Role of wild, neglected and underutilized foods in reducing the cost of a nutritionally adequate diet in the eastern region of Baringo District, Kenya

Bioworld International, Save the Children UK, and National Museums of Kenya

Summary

The study aimed to review the role of wild plants, neglected and underutilized species (NUS) in achieving a cost reduction of a nutritionally adequate diet in the dry and wet season in the eastern region of Baringo District, Kenya. The study reviewed agro-ecological zones which contribute to a wide diversity of indigenous neglected and underutilized plant species. The study also aimed to review the role of wild foods in reducing the cost of meeting nutritional requirements and population needs. The study reviewed the potential role of wild and NUS in reducing the cost of meeting nutritional requirements and population needs. The study reviewed the potential role of wild and NUS in reducing the cost of meeting nutritional requirements and population needs.

Methods

1. A desk review of the literature on wild and NUS in the region and collection of voucher specimens deposited at the National Museums of Kenya during the dry (February/March) and wet season (July/August) in 2012.
2. A market survey to assess price and availability of all local foods in the region.
3. Individual questionnaires and focus group discussions in 7 villages with mothers of different wealth levels.

Results

1. Local food diversity found in the ethnobotanical study:
   a. A total of 56 wild food plants (35 fruits, 21 vegetables, 10 cereals, 10 roots and tubers, 10 edible mushrooms and 62 edible animal foods species (30 mammals, 15 birds and 9 insects) were recorded during the dry season (February/March).
   b. 126 wild food species were recorded in the wet season (July/August).
   c. The wild foods chosen for their potential to significantly reduce the cost of a nutritionally adequate diet were based on their availability, balance in the two seasons, the availability and frequency of their nutrient profile and the local population’s preference. They included: Solanum nigrum, Lam., wild vegetables (including wild cabbage, wild potatoes, wild carrots, and 4 wild fruits, Miscellaneous American L. (barbarea aculeata (Klotzsch) Herrm. and Ziziphus mucronata Lam.)), and yardlong bean (Vigna unguiculata (Lam.) Walp.).

Conclusions

1. The study demonstrated that wild foods, with the exception of wild vegetables, wild fruits, and yardlong bean, could be used to significantly reduce the cost of a nutritionally adequate diet.
2. The study concluded that wild foods, with the exception of wild vegetables, wild fruits, and yardlong bean, could be used to significantly reduce the cost of a nutritionally adequate diet.

Acknowledgements

The study was undertaken by Bioversity International together with Save the Children UK and the Museums of Kenya with support from the Bill and Melinda Gates Foundation and the Agriculture for Nutrition and Health Research Programme (A4NH) of the CGIAR. The team is as follows: Cogill B, Terzoni C, Budworth M, Lam, JA, AD, and CK were involved in Cost of the Diet Analysis; JM carried out the ethnobotanical survey; FM and JF developed the projections; BS and ST were responsible for review, analysis, and report content development.

The study was undertaken by Bioversity International together with Save the Children UK and the Museums of Kenya with support from the Bill and Melinda Gates Foundation and the Agriculture for Nutrition and Health Research Programme (A4NH) of the CGIAR. The team is as follows: Cogill B, Terzoni C, Budworth M, Lam, JA, AD, and CK were involved in Cost of the Diet Analysis; JM carried out the ethnobotanical survey; FM and JF developed the projections; BS and ST were responsible for review, analysis, and report content development.

1. Biocultural diversity is a key resource for ensuring nutrition in the 21st century; the role of wild and NUS in reducing the cost of a nutritionally adequate diet in the region of Kenya.
2. The study was undertaken by Bioversity International together with Save the Children UK and the Museums of Kenya with support from the Bill and Melinda Gates Foundation and the Agriculture for Nutrition and Health Research Programme (A4NH) of the CGIAR. The team is as follows: Cogill B, Terzoni C, Budworth M, Lam, JA, AD, and CK were involved in Cost of the Diet Analysis; JM carried out the ethnobotanical survey; FM and JF developed the projections; BS and ST were responsible for review, analysis, and report content development.

References

- Cogill B, Terzoni C, Budworth M, Lam, JA, AD, and CK were involved in Cost of the Diet Analysis; JM carried out the ethnobotanical survey; FM and JF developed the projections; BS and ST were responsible for review, analysis, and report content development.

Table 1: Daily cost of a modeled nutritious diet without wild foods and percentage reduction of daily cost by integrating 5 wild foods in the model and for all selected wild species together. It was assumed that the wild foods could be added to the model at the lowest cost of the species in the two seasons. The model used in this study generated valuable results, however, there are a number of limitations.

Conclusions

1. The study demonstrated that wild foods, with the exception of wild vegetables, wild fruits, and yardlong bean, could be used to significantly reduce the cost of a nutritionally adequate diet.
2. The study concluded that wild foods, with the exception of wild vegetables, wild fruits, and yardlong bean, could be used to significantly reduce the cost of a nutritionally adequate diet.

Acknowledgements

The study was undertaken by Bioversity International together with Save the Children UK and the Museums of Kenya with support from the Bill and Melinda Gates Foundation and the Agriculture for Nutrition and Health Research Programme (A4NH) of the CGIAR. The team is as follows: Cogill B, Terzoni C, Budworth M, Lam, JA, AD, and CK were involved in Cost of the Diet Analysis; JM carried out the ethnobotanical survey; FM and JF developed the projections; BS and ST were responsible for review, analysis, and report content development.

1. Biocultural diversity is a key resource for ensuring nutrition in the 21st century; the role of wild and NUS in reducing the cost of a nutritionally adequate diet in the region of Kenya.