**Nutrition News for Africa**

**Abstract - October 30, 2002**

Home gardens focusing on the production of yellow and dark-green leafy vegetables increase the serum retinol concentrations of 2-5-y-old children in South Africa

Faber et al; American Journal of Clinical Nutrition, 2002; 76: 1048-54

In South Africa, 1 in 3 preschool children has a serum retinol concentration <0.7 umol/l. Children from rural areas are the most affected. Production of yellow and dark-green leafy vegetables at the household level could provide households in economically and socially deprived communities with direct access to provitamin A-rich foods. The objective of this study was to determine whether a home-gardening program would improve the dietary intake of yellow and dark-green leafy vegetables and serum retinol concentrations of children. The home-gardening program was integrated with a community-based growth-monitoring system in a rural village in KwaZulu Natal, South Africa. A neighboring village served as control.

Results at follow-up (20 mo after implementation of the program):

- In the experimental village, 126 home gardens were established, representing approximately one-third of the households. 54% of these gardens belonged to households with preschool children. Food security was the first priority of the households: only 8% of the households with project gardens sold some of the produce for cash.
- Maternal knowledge regarding vitamin A improved significantly in the experimental village (P =0.001).
- Children 2-5-y-old from the experimental village consumed yellow and dark-green leafy vegetables more often than did children from the control village. As a result, children serum retinol concentrations in the experimental village increased significantly (P =0.0078), whereas those in the control village decreased significantly (P =0.0148).
- Children from the experimental village had significantly higher (P =0.005) serum retinol concentrations (0.81 ±0.22 mol/L; n = 110) than did children from the control village (0.73 ±0.19 mol/L; n =111). Among children from the experimental village, those from households with a project garden had significantly higher serum retinol concentrations than did those from households without a project garden. In the experimental village, the proportion of children with a serum retinol concentration < 0.7 umol/l decreased from 58% to 34%.

**Conclusion**

Home-gardening programs focused on the production of yellow and dark-green leafy vegetables can significantly improve the vitamin A status of preschool children. The impact of such programs is likely to be greater when they are liked to nutrition education and primary health care activities.