

Do we produce enough fruits and vegetables to meet global health need?

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Abstract Text:

Objective: Low fruit and vegetable (FV) intake is a leading risk factor for chronic disease globally, but much of the world's population does not consume the recommended servings of FV daily. We examine whether global and country-level supplies of FV are sufficient to meet current and growing population needs.

Methodology: We used global data on agricultural production and population size from the United Nations' 2009 Food Balance Sheets and World Population Prospects, respectively, to compare supply of FV in 2009 with population need, globally and in individual countries. Using agricultural production and population projections, we also estimated supply and need of FV for 2025 and 2050.

Results: We found that the global supply of FV falls, on average, 22% short of population need according to nutrition recommendations (supply:need ratio: 0.78 [Range: 0.05–2.01]). This ratio varies widely by country income level, with a median supply:need ratio of 0.42 and 1.02 in low-income and high-income countries, respectively. A sensitivity analysis accounting for need-side food wastage showed similar insufficiency, to a slightly greater extent (global supply:need ratio: 0.66, varying from 0.37 [low-income countries] to 0.77 [high-income countries]). Assuming medium fertility and projected growth in agricultural production, the global supply:need ratio for FV increases slightly to 0.81 by 2025 and to 0.88 by 2050, with similar patterns seen across country income levels. In a sensitivity analysis assuming no change from current levels of FV production, the global supply:need ratio for FV decreases to 0.66 by 2025 and to 0.57 by 2050.

Conclusion: Increased FV production and consumption are required to meet current and future population health needs, particularly in low-income countries.