

CHAPTER TWO

Underlying Drivers of Nitrogen Flows in California

Appendix 2.1 Income and Patterns of Demand for Food

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This is an appendix to Chapter 2 of *The California Nitrogen Assessment: Challenges and Solutions for People, Agriculture, and the Environment*. Additional information about the California Nitrogen Assessment (CNA) and appendices for other chapters are available at the Agricultural Sustainability Institute website: asi.ucdavis.edu/nitrogen

Suggested citation:

A Champetier, D Sumner, TP Tomich, S Brodt, M Coley, VR Haden, M Kreith, JT Rosen-Molina, and K Thomas. "Appendix 2.1: Income and patterns of demand for food." Online appendices for California Nitrogen Assessment: Challenges and Solutions for People, Agriculture, and the Environment. TP Tomich, SB Brodt, RA Dahlgren, and KM Scow, eds. Agricultural Sustainability Institute at UC Davis. (2016). asi.ucdavis.edu/nitrogen.

2.1 Income and Patterns of Demand for Food

Elasticity estimates which take into account variations in food prices provide an indicator of the relationship between income per capita and food demand. Alderman (1986) compared 15 studies, which covered 11 countries, and concluded that while all consumers readily change consumption patterns when prices for food items increase, the poor are more likely to make such substitutions than the well-off. Such substitutions by the poor are in addition to changes that they make that are attributable to a reduction in real income when food prices increase.

For the United States, it is provisionally agreed by most that consumers' responses to changes in income, approximated by changes in food expenditures, vary by commodity and are high for foods that have high price elasticities (e.g., fruits, vegetables, and juice). Responses are low for foods that have low price elasticities (e.g., eggs), reflecting that consumers do not significantly change their consumption when the prices for these commodities change (Huang and Lin, 2000; Okrent and Alston, 2011).

The findings for low income countries are more speculative and subject to methodological debates over data aggregation and the timing of behavior changes. Alderman (1986) estimated that families that consume 1,750-2,000 calories per person per day will increase their food expenditure by 8.2% for an income increase of 10% - an income elasticity of 0.82. However, calorie intake will only increase by 4.8% as some of the increase in expenditure is used to increase perceived diet quality. In contrast, Dawson and Tiffin (1998) estimate an income elasticity of calorie intake of 0.34 for the period 1961-1992 in India.

References

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