

## WILLIAM A. MASTERS

(In electronic versions, click colored links to external sites)

Professor, [Friedman School of Nutrition Science and Policy](#), Tufts University  
150 Harrison Ave. • Boston, MA 02111  
Office phone: +1.617.636.3751 • Email: [william.masters@tufts.edu](mailto:william.masters@tufts.edu)  
[sites.tufts.edu/willmasters](http://sites.tufts.edu/willmasters) • [sites.tufts.edu/foodecon](http://sites.tufts.edu/foodecon) • [sites.tufts.edu/foodpricesfornutrition](http://sites.tufts.edu/foodpricesfornutrition)

### EDUCATION

**Stanford University**, PhD (1991) in Applied Economics at the [Food Research Institute](#)  
**Yale University**, BA (1984) in Economics and Political Science  
**Deep Springs College** (1979-81), [course credits transferred](#)

### EMPLOYMENT

#### **Tufts University**

*Professor* (from 7/10) [Friedman School of Nutrition Science and Policy](#), with a secondary appointment (from 9/13) in the [Department of Economics](#).  
*Chair* (7/11-9/14), [Food and Nutrition Policy Department](#) at the Friedman School.  
Courses taught: [Economics for food & nutrition policy](#) (2011-), [Food economics](#) (2015)

#### **Purdue University**

*Professor* (4/02-6/10), *Assoc. Prof.* (7/96-4/02); *Asst Prof.* (12/91-7/96)  
*Associate Head*, [Department of Agricultural Economics](#) (2/07-6/10)  
Courses taught: [Agric. development, trade and policy](#) (grad & undergrad, 1992-2010)

#### **Columbia University** (9/03-8/04)

*Visiting Professor*, [School of International and Public Affairs](#)  
*Interim Executive Director*, [Center on Globalization and Sustainable Development](#)  
Led diversified social-science research program (8 staff, 20 affiliates)  
Instructor/creator of new course on food and agriculture in development

#### **Harvard University** (1/2000 – 12/2000)

*Visiting Scholar*, [Center for International Development](#)

#### **Stanford University** (1985-1991)

*Graduate Fellow*, Teaching and Research Assistant in the [Food Research Institute](#)

#### **University of Zimbabwe, Harare, Zimbabwe** (1988-1990)

*Research Associate* and part-time lecturer

#### **International Food Policy Research Institute, Washington DC** (1987)

*Research Assistant*

#### **Mavhudzi Government Secondary School, Nyazura, Zimbabwe** (1985)

*Teacher*, English Department

#### **COLANTA Dairy Cooperative, Medellin, Colombia** (1983)

*Intern* in Technical Assistance Department

#### **Haitian Development Foundation, Port-au-Prince, Haiti** (1981)

*Intern* in Head Office Staff

## PROFESSIONAL HONORS AND AWARDS

### *Career recognition*

Fellow of the Agricultural & Applied Economics Association (AAEA), 2020

Honorary Fellow of the African Association of Agricultural Economists (AAAE), 2010

### *Professional awards from the Agricultural & Applied Economics Association*

Quality of Communication Award of the AAEA, 2022

Quality of Research Discovery Award of the AAEA, 2019

Publication of Enduring Quality Award of the AAEA, 2014

Bruce Gardner Memorial Prize for Applied Policy Analysis of the AAEA, 2013

### *Fellowships, teaching and research awards*

Rockefeller Foundation Bellagio Residency, 2023

Tufts University Teaching with Technology Award (student-nominated), 2022 and 2019

Tufts University StAAR Center Disability Advocate Award (student-nominated), 2022

Friedman School outstanding faculty of the year, 2020

Fulbright Dissertation Research Grant, 1988-90

Harry S. Truman Scholarship, awarded 1981

## SELECTED PROFESSIONAL SERVICE

Member, [Board of Directors](#), Council on Food, Ag. & Resource Economics, 2022-present

Member, [Economic Advisory Council](#) of the US Millennium Challenge Corp., 2021-present

Editorial Board, [Global Food Security](#), 2014-present

Editorial Board, [Global Challenges: Food, Agriculture and Nutrition](#), 2015-present

Elected Secretary, [Tufts University Faculty Senate](#) 2018-20, member 2017-20

Chair, AAEA Sections for [International](#) 2018-19 & [Food Safety & Nutrition](#) 2013-14

External Member, [IFPRI](#) Institutional Review Board, 2015-18

Cochair, [FSIN Technical Working Group](#) on Measuring Food & Nutrition Security, 2015-16

Co-Editor-in-Chief, [Agricultural Economics](#), 2007-2011 (with [Gerald Shively](#))

Board of Trustees, [Deep Springs College](#), 2002-2011(chair, Academic Affairs ctee.)

## LANGUAGES

Fluent French, some Spanish

## PUBLICATIONS

### **BOOKS**

**Masters, W.A.** and A.B. Finaret, *Food Economics: Agriculture, Nutrition and Health*. New York: Palgrave. (Also see [teaching website](#)).

Norton, G., Alwang J., **W.A. Masters**, *Economics of Agricultural Development* (4<sup>th</sup> ed. 2022). New York: Routledge. (See [review of 1<sup>st</sup> ed. in ERAE](#))

Anderson, K. (eds.) and **W.A. Masters**, *Distortions to Agricultural Incentives in Africa* (2009). Washington DC: The World Bank.

**W.A. Masters** *Government and Agriculture in Zimbabwe* (1994). Westport CT: Praeger.  
(Reviewed [here](#), [here](#), and [here](#))

Lewis, M. and **W.A. Masters**, *Better English: A Handbook of Common Errors* (1987). Harare, Zimbabwe: Longman.

## HANDBOOK ARTICLE

**Masters, W.A.**, A.B. Finaret and S.A. Block, 2022. [The economics of malnutrition: Dietary transition and food system transformation](#). *Handbook of Agricultural Economics, volume 6*, edited by C.B. Barrett and D.R. Just. Amsterdam: Elsevier.

## REFEREED JOURNAL ARTICLES

*(Author sequence in health and natural sciences puts senior author last, with student or postdoctoral author first; author names in italics were students or postdocs at time of writing; the list totals 87 refereed articles, in addition to 22 book chapters and many other reports.)*

*Gilbert, R., L. Costlow, J. Matteson, J. Rauschendorfer, E. Krivonos, S.A. Block and **W.A. Masters*** (2024). [Trade policy reform, retail food prices and access to healthy diets worldwide](#). *World Development*, 177: p.106535.

*Wallingford, J.K., and W.A. Masters* (2024). [Least-cost diets to teach optimization and consumer behavior, with applications to health equity, poverty measurement and international development](#), forthcoming in *Journal of Economic Education*, exercise online [here](#).

*Wallingford, J., Martinez, E.M. and **W.A. Masters*** (2023). [COVID-19 mobility restrictions and stay-at-home behaviour in 2020 were associated with higher retail food prices worldwide](#). *Global Food Security*, p.100702.

*Cliffer, I.R., E.N. Naumova, **W.A. Masters**, N. Perumal, F. Garanet, and B.L. Rogers* (2023). [Peak timing of slowest growth velocity among young children coincides with highest ambient temperatures in Burkina Faso](#). *American Journal of Clinical Nutrition*, 2023.09.021.

*Alemu, R., **Masters, W.A.** and A.B. Finaret* (2023). [Sibling rivalry between twins in utero and childhood: Evidence from birthweight and survival of 95 919 twin pairs in 72 low-and middle-income countries](#). *American Journal of Human Biology*, 35(7): e23887.

*Lividini, K. and **W.A. Masters*** (2022) [Accounting for global nutrient flows from farm to fork reveals past trends to help guide food system change](#). *Nature Food*, 3:703–715 (preprint).

*Schneider, K., L. Christiaensen, P.J. Webb & **W.A. Masters*** (2022), [Assessing the affordability of nutrient-adequate diets](#). *American Journal of Agricultural Economics*, e12334.

*Bai, Y., Costlow, L., Ebel, A., Laves, S., Ueda, Y., Volin, N., Zamek, M., and **W.A. Masters***, 2022. [Retail prices of nutritious food rose more in countries with higher COVID-19 case counts](#). *Nature Food*, 3, 325–330.

*Bai, Y., A. Herforth and **W.A. Masters***, 2022. [Global variation in the cost of a nutrient adequate diet by population group](#). *Lancet Planetary Health*, 6(1): 19-28.

*Cliffer, I.R., **W.A. Masters**, N. Perumal, E.N. Naumova, A.N. Zeba, F. Garanet and B.L. Rogers*, 2022. [Monthly measurement of child lengths between 6 and 27 months of age in Burkina Faso reveals both chronic and episodic growth faltering](#). *Am. J. of Clinical Nutr.*, 115(1): 94-104.

- Cliffer, I.R., N. Perumal, **W.A. Masters**, E.N. Naumova, L.N. Ouedraogo, F. Garanet and B.L. Rogers, 2022. [Linear growth spurts are preceded by higher weight gain velocity and followed by weight slowdowns among rural children in Burkina Faso](#). *J. of Nutr.*, 152(8):1963-1973.
- Bai, Y., Costlow, L., Ebel, A., Laves, S., Ueda, Y., Volin, N., Zamek, M., Herforth, A. and **W.A. Masters**, 2021. [Retail consumer price data reveal gaps and opportunities to monitor food systems for nutrition](#). *Food Policy*, 104: 102148.
- Mozaffarian, D., *El-Abbadi, N.H., O'Hearn, M., Erndt-Marino, J., Masters, W.A., Jacques, P., Shi, P., Blumberg, J.B. and R. Micha*, 2021. [Food Compass is a nutrient profiling system using expanded characteristics for assessing healthfulness of foods](#). *Nature Food*, 2: 809–818.
- Zaharia, S., **Masters, W.A.**, Ghosh, S., Shively, G.E., Gurung, S., Manohar, S., Thorne-Lyman, A.L., West, K.P., Appel, K.H., Liang, L. and R. Shrestha, 2021. [Recovery without resilience? A novel way to measure nutritional resilience in Nepal, Bangladesh, and Uganda](#). *Global Food Security*, 31: 100573.
- Cliffer, I.R., **Masters, W.A.** and B.L. Rogers, 2021. [Fortified blended flour supplements displace plain cereals in feeding of young children](#). *Maternal & Child Nutrition*, 17(2): e13089.
- Bell, W., Coates, J., Fanzo, J., Wilson, N.L. and **W.A. Masters**, 2021. [Beyond price and income: Preferences and food values in peri-urban Viet Nam](#). *Appetite*, 166, p.105439.
- Bell, W., Lividini, K. and **W.A. Masters**, 2021. [Global dietary convergence from 1970 to 2010 altered inequality in agriculture, nutrition and health](#). *Nature Food 2: 156–165*.
- Webb, P., Danaei, G., **Masters, W.A.**, Rosettie, K.L., Leech, A.A., Cohen, J., Blakstad, M., Kranz, S. and Mozaffarian, D., 2021. [Modelling the potential cost-effectiveness of food-based programs to reduce malnutrition](#). *Global Food Security*, 29: 100550.
- Bai, Y., E. Naumova and **W.A. Masters**, 2020. [Seasonality in diet costs reveals food system performance in East Africa](#). *Science Advances*, 6(49): eabc2162
- Bai, Y., R. Alemu, S.A. Block, D. Headey, and **W.A. Masters**, 2020. [Cost and affordability of nutritious diets at retail prices: Evidence from 177 countries](#). *Food Policy*, 99: e101983.
- Finaret, A.B. and **W.A. Masters**, 2020. [Can shorter mothers have taller children? Nutritional mobility, health equity and the intergenerational transmission of relative height](#). *Economics & Human Biology*, 39: e100928.
- Wang, J., **W.A. Masters**, Y. Bai, D. Mozaffarian, E.N. Naumova and G.M. Singh, 2020. [The International Diet-Health Index: a novel tool to evaluate diet quality for cardiometabolic health across countries](#). *BMJ Global Health*, 5(7): e002120.
- Hirvonen, K., Y. Bai, D. Headey and **W.A. Masters**, 2020. [Affordability of the EAT–Lancet reference diet: a global analysis](#). *Lancet Global Health*, 8(1): e59-e66.
- Singh, P. and **W.A. Masters**, 2020. [Performance bonuses in the public sector: Winner-take-all prizes versus proportional payments to reduce child malnutrition in India](#). *Journal of Development Economics*, 146: 102295.
- Cason, T.N., **W.A. Masters**, and R.M. Sheremeta, 2020. [Winner-take-all and proportional-prize contests: theory and experimental results](#). *J. of Econ. Behavior and Org.*, 175: 314-327.

- Michler, J.D., Masters, W.A. and A. Josephson, 2020. [Research ethics beyond the IRB: Selection bias and the direction of innovation in applied economics](#). *Applied Econ. Perspectives and Policy*, 43: 13132.
- Choudhury, S., D. Headey and **W.A. Masters**, 2019. [First foods: Diet quality among infants aged 6–23 months in 42 countries](#). *Food Policy*, 88:101762.
- Finaret, A.B. and **W.A. Masters**, 2019. [Beyond calories: The new economics of nutrition](#). *Annual Review of Resource Economics*, 11: 14.1-23.
- Finaret, A.B. and **W.A. Masters**, 2019. [Correcting for artifactual correlation between misreported month of birth and attained height-for-age reduces but does not eliminate measured vulnerability to season of birth in poorer countries](#). *Am. J. of Clinical Nutrition*, 110(2): 485–497.
- Larsen, A.F., D.D. Headey and **W.A. Masters**, 2019. [Misreporting month of birth: Diagnosis and implications for research on nutrition and early childhood in developing countries](#). *Demography*, 56(2): 707-29.
- Schneider, K. and **W.A. Masters**, 2019. [Orange Fanta versus orange fruit: A novel measure of nutrition knowledge in Malawi](#). *Maternal & Child Nutrition*, 15(1): e12656.
- Masters, W.A.**, Y. Bai, A. Herforth, D. Sarpong, F. Mishili, J. Kinabo and J.C. Coates, 2018. [Measuring the affordability of nutritious diets in Africa: Price indexes for diet diversity and the cost of nutrient adequacy](#). *American Journal of Agricultural Economics*, 100(5): 1285-1301.
- Masters, W.A.**, N.Z. Rosenblum and R.G. Alemu, 2018. [Agricultural transformation, nutrition transition and food policy in Africa: Preston Curves reveal new stylized facts](#). *Journal of Development Studies*, 54(5): 788-802.
- Harding, K.L., V.M. Aguayo, **W.A. Masters**, and P. Webb, 2018. [Education and micronutrient deficiencies: an ecological study exploring interactions between women’s schooling and children’s micronutrient status](#), *BMC Public Health*, 18(1): 470.
- Masters, W.A.** et al. for the Global Nutrition and Policy Consortium, 2018. [Designing programs to improve diets for maternal and child health: Costs and impacts of nutrition-sensitive programs in Ethiopia, Nigeria, and India](#), *Health Policy & Planning*, 33(4): 564-573.
- Masters, W.A.** et al. for the Global Nutrition and Policy Consortium, 2017. [Priority interventions to improve maternal and child diets in Sub-Saharan Africa and South Asia](#). *Maternal & Child Nutrition*, 14(2): e12526.
- Singh, P. and **W.A. Masters**, 2017. [Impact of caregiver incentives on child health: evidence from an experiment with Anganwadi workers in India](#), *Journal of Health Economics*, 55(Sept.): 219-231.
- Finaret, A.B. and **W.A. Masters**, 2017. [Nutrition smoothing: Can proximity to towns and cities protect rural children against seasonal variation in agroclimatic conditions at birth?](#) *PLOS ONE*, 12(1): e0168759.

- Masters, W.A., M. Nene, and W. Bell, 2016.** Nutrient composition of premixed, packaged complementary foods for sale in developing countries: Lack of standards threatens infant growth. *Maternal & Child Nutrition*, 13(4): e12421 [preprint] (NY Times)
- Masters, W.A., A. Hall, E. Martinez, P. Shi, G. Singh, P. Webb, and D. Mozaffarian, 2016.** The nutrition transition and agricultural transformation: A Preston Curve approach. *Agricultural Economics*, 47(S1): 97–114. [preprint]
- Mulmi, P., S.A. Block, G.E. Shively, and W.A. Masters, 2016.** Climatic conditions and child height: Sex-specific vulnerability and the protective effects of sanitation and food markets in Nepal. *Economics & Human Biology*, 23: 63-75.
- Urban, L.E., J.L. Weber, M.B. Heyman, R.L. Schichtl, S. Verstraete, N.S. Lowery, S.K. Das, M.M. Rogers, C. Economos, W.A. Masters, and S.B. Roberts.** Energy contents of frequently ordered restaurant meals. *J. of the Academy of Nutrition and Dietetics*, 116 (4): 590-598.
- Finaret Darrrouzet-Nardi, A., W.A. Masters, 2015.** Urbanization, market development and malnutrition in farm households: evidence from the Demographic and Health Surveys, 1986–2011. *Food Security*, 7(3): 521-533.
- McMillan M., W.A. Masters, and H. Kazianga, 2014.** Disease control, demographic change and institutional development in Africa. *J. of Development Economics* 110: 313-26. [preprint]
- Motamed, M., W.A. Masters, and R.J.G.F. Florax, 2014.** Agriculture, transportation and the timing of urbanization. *J. of Economic Growth*, 19(3): 339-368. [preprint]
- Webb, P., J. Griffiths, W.A. Masters, and R. Deckelbaum, 2014.** Agriculture, nutrition, and health in global development: typology and metrics for integrated interventions and research. *Annals of the New York Academy of Sciences*, 2(1):258-269. [preprint]
- Chibwana, C., G. Shively, W.A. Masters, M. Fisher, and C. Jumbe, 2014.** Measuring the Impacts of Malawi’s Farm Input Subsidy Programme. *African J. of Agricultural and Resource Economics*, 9(2): 132-147. [article]
- Masters, W.A. et al., 2013.** Urbanization and Farm Size in Asia and Africa: Implications for Food Security and Agricultural Research. *Global Food Security*, 2(3), 156-165. [preprint]
- Block, S.A., W.A. Masters, and P. Bhagowalia, 2012.** Does Child Undernutrition Persist Despite Poverty Reduction in Developing Countries? Quantile Regression Results. *Journal of Development Studies*, 48(2): 1699-1715. [preprint]
- Ngleleza, G., W.A. Masters, and R. Florax, 2011.** Spatial Inequality: Overcoming Neighborhood Effects in Africa. *Applied Econometrics and Intl. Development*, 11(2): 165-190.
- Bhagowalia, P., W.A. Masters, and S. Chen, 2011.** Effects and Determinants of Mild Underweight among Preschool Children across Countries and Over Time. *Economics & Human Biology*, 9(1): 66-77.
- Cason, T., W.A. Masters, and R. Sheremeta, 2010.** Entry into Winner-Take-All and Proportional-Prize Contests: An Experimental Study. *J. of Public Econ.*, 94(9-10): 604-611.
- Masters, W.A. and G. Shively, 2008.** Introduction to the Special Issue on the World Food Crisis. *Agricultural Economics*, 39(3s): 373-374.

- Masters, W.A.**, 2008. [Beyond the Food Crisis: Trade, Aid and Innovation in African Agriculture.](#) *African Technology Development Forum*, 5(1-2): 3-13.
- Shively, G., **W.A. Masters**, and R. Yao, 2007. [How Successful Are Government Interventions in Food Markets? Insights from the Philippine Rice Market.](#) *Philippine J. of Dev.*, 34(1b): 35-59.
- Humphreys, M., **W.A. Masters**, and M. Sandbu, 2006. [The Role of Leadership in Democratic Deliberations: Results from a Field Experiment in Sao Tome and Principe.](#) *World Politics* 58(4): 583-622.
- Johnson, M.E., **W.A. Masters**, and P.V. Preckel, 2006. [Diffusion and Spillover of New Technology: A Heterogeneous-Agent Model for Cassava in West Africa.](#) *Ag. Econ.*, 35(2): 119-129.
- Masters, W.A.** and H. Kazianga, 2006. [Property Rights, Production Technology and Deforestation: Cocoa in Cameroon.](#) *Ag. Econ.*, 35(1): 19-26.
- Masters, W.A.**, 2005. [Paying for Prosperity: How and Why to Invest in Agricultural Research and Development in Africa.](#) *J. of Intl. Affairs*, 58(2): 35-64.
- Masters, W.A.** and J. Edwin, 2005. [Genetic Improvement and Cocoa Yields in Ghana.](#) *Experimental Agriculture*, 41(4): 491-503.
- Masters, W.A.**, 2005. [Research Prizes: A New Kind of Incentive for Innovation in African Agriculture.](#) *Intl. J. of Biotech*, 7(1/2/3): 195-211.
- Masters, W.A.** and M. Johnson, 2004. [Complementarity and Sequencing of Innovations.](#) *Economics of Innovation and New Technology*, 13(1): 19-31.
- Masters, W.A.**, 2003. [Research Prizes: A Mechanism to Reward Agricultural Innovation in Low-Income Regions.](#) *Ag. Bio. Forum*, 6(1&2): 71-74.
- Masters, W.A.** and M.S. McMillan, 2003. [An African Growth Trap: Production Technology and the Time-Consistency of Agricultural Taxation, R&D and Investment.](#) *Review of Development Economics*, 7(2): 179-191.
- Chiremba, S. and **W.A. Masters**, 2003. [The experience of resettled farmers in Zimbabwe.](#) *African Studies Quarterly* 7(2-3).
- Masters, W.A.** and H. Kazianga, 2002. [Investing in Soils: Field Bunds and Microcatchments in Burkina Faso.](#) *Environment and Development Economics*, 7(3): 571-591.
- Masters, W.A.** and D. Sanogo, 2002. [Welfare Gains from Quality Certification of Infant Foods: Results from a Market Experiment in Mali.](#) *Am. J. of Agricultural Economics*, 84(4): 974-989.
- Sanogo, D. and **W.A. Masters**, 2002. [A Market-Based Approach to Child Nutrition: Mothers' Demand for Quality Certification of Infant Foods in Bamako, Mali.](#) *Food Policy*, 27(3): 251-268.
- Martinez, E.A.C., G.E. Shively, and **W.A. Masters**, 2002. [Testing the Link between Public Intervention and Food Price Variability: Evidence from Rice Markets in the Philippines.](#) *Pacific Econ. Rev.*, 7(3): 545-554.
- Masters, W.A.** and M.S. McMillan, 2001. [Climate and Scale in Economic Growth.](#) *J. of Econ. Growth*, 6(3): 167-186.

- McMillan, M.S. and **W.A. Masters**. 2000. [Understanding the Political Economy of Agriculture in the Tropics](#). *Am. J. of Ag. Econ.*, 82(3): 738-42.
- Masters, W.A.**, R. Davies, and T.W. Hertel, 2000. [L'Europe, L'Afrique du Sud, et l'Afrique Australe: Intégration Régionale dans un Contexte Mondial](#). *Revue d'Economie du Developpement*, 3: 113-134.
- Fisher, M.G.*, **W.A. Masters**, and M. Sidibé, 2000. [Technical change in Senegal's irrigated rice sector: impact assessment under uncertainty](#). *Ag. Econ.*, 24(2): 179-197.
- Fisher, M.G.*, and R. Warner, and **W.A. Masters**, 2000. [Gender and Agricultural Change: Crop-Livestock Interaction in Senegal](#). *Soc. and Nat. Res.*, 13(3): 203-222.
- Hertel, T.W., **W.A. Masters**, and *A. Elbehri*, 1998. [The Uruguay Round and Africa: A Global, General Equilibrium Analysis](#). *J. of African Econ.*, 7(2): 208-234.
- Masters, W.A.** and *E. Ianchovichina*, 1998. [Measuring Exchange Rate Misalignment: Inflation Differentials and Domestic Relative Prices](#). *World Dev.*, 26(3): 465-77.
- Dalton, T.J.* and **W.A. Masters**, 1998. [Pasture Taxes and Agricultural Intensification in Southern Mali](#). *Ag. Econ.*, 19(1-2): 27-32.
- Masters, W.A.**, T. Bedingar and J.F. Oehmke, 1998. [The Impact of Agricultural Research in Africa: Aggregate and Case Study Evidence](#). *Ag. Econ.* 19(1-2): 81-86.
- Mwanaumo, A.* **W.A. Masters**, and P.V. Preckel, 1997. [Spatial Analysis of Maize Market Policy Reform in Zambia](#). *Am. J. of Ag. Econ.*, 79(2): 514-23.
- Dalton, T.J.*, **W.A. Masters**, and K.A. Foster, 1997. [Production Costs and Input Substitution in Zimbabwean Agriculture](#). *Ag. Econ.*, 17 (2-3): 201-209.
- Masters, W.A.** and A. Winter-Nelson, 1995. [Measuring the Comparative Advantage of Agricultural Activities: Domestic Resource Costs and the Social Cost-Benefit Ratio](#). *Am. J. of Ag. Econ.*, 77(2): 243-250.
- Ahmed, M.M.*, **W.A. Masters**, and J.H. Sanders, 1995. [Returns from Research in Economies with Policy Distortions: Hybrid Sorghum in Sudan](#). *Ag. Econ.* 12: 183-192.
- Masters, W.A.**, 1993. [Measuring Protection in Agriculture: the Producer Subsidy Equivalent Revisited](#). *Oxford Agrarian Studies* 21(2): 133-142.
- Masters, W.A.**, 1993. [The Scope and Sequence of Grain Market Reform in Zimbabwe](#). *Food Res. Inst. Studies* 22(3): 227-252.
- Masters, W.A.** and E.A. Nuppenau, 1993. [Panterritorial versus Regional Pricing for Maize in Zimbabwe](#). *World Development* 21(10): 1647-1658.
- Masters, W.A.**, 1991. [Trade Policy and Agriculture: Measuring the Real Exchange Rate in Zimbabwe](#). *Quarterly J. of Intl. Ag.*, 30(1): 21-36.



## COMMENTARY ARTICLES AND MEETING REPORTS

- Kennedy, E.T., Torero, M.A., Mozaffarian, D., **Masters, W.A.**, Steiner, R.A., Hendriks, S.L., Morrison, J.A., Merrigan, K.A., Ghosh, S.A. and Mason-d’Croze, D.E., 2023. [Beyond the food systems summit: Linking recommendations to action—the true cost of food](#). *Current Developments in Nutrition*, 7(5), p.100028.
- Fanzo, J., C. Rudie, I. Sigman, S. Grinspoon, T.G. Benton, M.E. Brown, N. Covic, K. Fitch, C.D. Golden, D. Grace, M.F. Hivert, P. Huybers, L.M. Jaacks, **W.A. Masters**, N. Nisbett, R.A. Richardson, C.R. Singleton, P. Webb, W.C. Willett, 2022. [Sustainable food systems and nutrition in the 21st century: a report from the 22nd annual Harvard Nutrition Obesity Symposium](#). *The American Journal of Clinical Nutrition*, 115(1), pp.18-33.
- Madzorera, I., L. Jaacks, R. Paarlberg, A. Herforth, S. Bromage, S. Ghosh, S.S. Myers, **W.A. Masters**, W.W. Fawzi, 2021. [Food systems as drivers of optimal nutrition and health](#). *Current Developments in Nutrition*, 5(S3): nzab062.
- Masters, W.A.**, B. Colaiezzi, K. Dennison, J. Hill, E. Jordan-Bell, A. Kablan, M. Thurber, L.J. Weatherspoon, and J. Oehmke, 2015. [Agricultural policy for improved nutrition in Africa and Asia: Evidence to guide the US Government's investments in food security](#). *Food Security*, 7(3): 747-750. [preprint]

## CHAPTERS IN BOOKS

- Masters, W.A.**, Martinez, E.M., Greb, F., Herforth, A. and Hendriks, S.L., 2023. [The cost and affordability of preparing a basic meal around the world](#). *Science and Innovations for Food Systems Transformation*, edited by J. von Braun, K. Afsana, L.O. Fresco and M.H.A. Hassan. Springer: Cham, Switzerland.
- Headey, D.D. and **W.A. Masters**, 2021. [Agriculture and undernutrition](#), chapter 10 in *Agricultural development: New perspectives in a changing world*, edited by S. Fan and K. Otsuka. Washington, DC: IFPRI.
- Headey, D.D. and **W.A. Masters**, 2019. [Agriculture for Nutrition: Direct and Indirect Effects](#), chapter 2 in *Agriculture for Improved Nutrition: Seizing the Momentum*, edited by S. Fan, S. Yosef and R. Pandya-Lorch. Washington, DC: CABI and IFPRI.
- Byerlee, D., **W.A. Masters**, and D.S. Robinson, 2017. [From Land Grab to Land Development: The Past and Potential of Private Investment in Frontier Agriculture](#), in *Agriculture and Rural Development in a Globalizing World*, edited by P. Pingali and G. Feder. Earthscan Food and Agriculture Series. London: Routledge.
- McMillan, M.S., **W.A. Masters**, and H. Kazianga, 2016. [Demographic Pressure and Institutional Change: Village-Level Response to Rural Population Growth in Burkina Faso](#) in *African Successes, Volume I: Government and Institutions*, edited by S. Edwards, S. Johnson, and D.N. Weil University of Chicago Press and NBER.
- Masters, W.A.**, 2016. [Economic Causes of Malnutrition](#), in M. Eggerdorfer et al., eds., *Good Nutrition: Perspectives for the 21st Century*, Basel: Karger.
- Masters, W.A.**, 2016. [Child Nutrition in Economic Development](#), in C.P. Duggan, J.B. Watkins, B. Koletzko and W.A. Walker, eds., *Nutrition in Pediatrics*, 5<sup>th</sup> ed. PMPH-USA.

- Masters, W.A.**, 2012. Transformational Incentives for Innovation and Aid Effectiveness: Pull Mechanisms, Contests, and Prizes, in R. Shah and S. Radelet, eds., *Frontiers in Development*. Washington, DC: USAID, pages 196-200.
- Masters, W.A.**, 2011. Africa's Turnaround: From Crisis to Opportunity in African Agriculture, chapter 11 in David R. Lee and Muna B. Ndulo, eds., *Food and Financial Crises: Impacts on Sub-Saharan Africa*, Wallingford, UK: CAB International, forthcoming.
- Masters, W.A.**, 2011. Economic Development, Government Policies and Food Consumption, chapter 14 in Jayson Lusk, Jutta Roosen and Jason Shogren, eds., *Oxford Handbook on the Economics of Food Consumption and Policy*, forthcoming.
- Masters, W.A.**, , *A.F. Garcia*, 2010. Agricultural Price Distortion and Stabilization: Stylized Facts and Hypothesis Tests in Kym Anderson (ed.), *Political Economy of Distortions to Agricultural Incentives*. Washington, DC: The World Bank, 2010.
- Masters, W.A.**, *G. Ngeleza*, R. Florax, 2009. Spatial Inequality and Economic Development in Africa in Munisamy Gopinath and Hanho Kim, eds., *Globalization and the Rural-Urban Divide*. Seoul: SNU Press, 2009.
- Masters, W.A.**, 2009. Trends in Agricultural Protection: How Might Agricultural Policy Evolve in the Coming Decades? in Alexander Sarris and Jamie Morrison, eds., *The Evolving Structure of World Agricultural Trade*. Rome, Italy: FAO.
- Masters, W.A.**, K. Anderson, 2009. Distortions to Agricultural Incentives in Sub-Saharan and North Africa in *Distortions to Agricultural Incentives: A Global Perspective, 1955 to 2007*. New York and Washington: Palgrave Macmillan and the World Bank.
- Masters, W.A.**, K. Anderson, and E. Bamou, 2009. Introduction and Summary Cameroon and Senegal, in K. Anderson and **W.A. Masters**, eds., *Distortions to Agricultural Incentives in Africa*. Washington DC: The World Bank, 2009.
- Masters, W.A.** (contributing author) 2005. Food chapter 8 (pages 209-241), in *Ecosystems and Human Well-Being: Findings of the Millenium Ecosystem Assessment*, edited by Rashid Hassan, Robert Scholes and Neville Ash. Washington: Island Press.
- Masters, W.A.** and M. McMillan, 2004. Ethnolinguistic Diversity, Government and Growth, ch. 7 (pp. 123-147) in *Welfare, Ethnicity and Altruism*, F. Salter, ed.. London: Frank Cass.
- Masters, W.A.**, 2003. Climate, Agriculture and Economic Development, chapter 8 (pages 166-83) in *Land Quality, Agricultural Productivity, and Food Security*, edited by K.D. Wiebe. Cheltenham, UK & Northampton MA, USA: Edward Elgar.
- Masters, W.A.**, T.W. Hertel, and M.J. Gelhar, 1999. Regionalism in World Food Markets: Implications for Trade in *Food Security, Diversification and Resource Management: Refocusing the Role of Agriculture*, edited by G.H. Peters and D.D. Hedley. Aldershot, UK: Dartmouth.
- Masters, W.A.** and J.W. Mellor, 1991. The Changing Roles of Multilateral and Bilateral Foreign Assistance in *Transitions in Development: The Role of Aid and Commercial Flows*, edited by Uma Lele and Ijaz Nabi. San Francisco: ICS Press.

**POLICY REPORTS AND SELECTED WORKING PAPERS**

- Martinez, E.M., N.T. Blackstone, P. Wilde, A.W. Herforth and W.A. Masters (2024), [Environmental impacts, nutritional profiles, and retail prices of commonly sold retail food items in 181 countries](#). Food Prices for Nutrition project working paper. Boston: Tufts University.
- Costlow, L., A. Herforth, T.B. Sulser, N. Cenacchi, and W.A. Masters, 2024. [How and where global food supplies fall short of healthy diets: Past trends and future projections, 1961-2020 and 2010-2050](#). Food Prices for Nutrition working paper. Boston, Tufts University.
- Herforth, A., C. Holleman, Y. Bai & W.A. Masters, 2023. [The cost and affordability of a healthy diet \(CoAHD\) indicators: methods and data sources](#). Metadata for FAOSTAT domain on Cost and Affordability of a Healthy Diet. Rome, FAO.
- Herforth, A., A. Venkat, Y. Bai, L. Costlow, C. Holleman & W.A. Masters, 2022. [Methods and options to monitor the cost and affordability of a healthy diet globally: Background paper for The State of Food Security and Nutrition in the World 2022](#). FAO Agricultural Development Economics Working Paper 22-03. Rome: FAO.
- Masters, W.A., E.M. Martinez, F. Greb, A. Herforth and S. L. Hendriks, 2021. [Cost and affordability of preparing a basic meal around the world](#). Research Partner Brief, UN Food System Summit Scientific Group, Bonn (Germany).
- Herforth, A., Y. Bai, A. Venkat, K. Mahrt, A. Ebel & W.A. Masters, 2020. [Cost and affordability of healthy diets across and within countries](#). Background paper for the State of Food Security and Nutrition in the World 2020. FAO Agricultural Development Economics Technical Study No. 9. Rome: FAO.
- Masters, W.A. and N. Rosenblum, 2017. [Senegal groundnut value chain: Competitiveness and prospects for development](#). Working Paper 117011. World Bank: Washington.
- Masters, W.A., 2016. [Assessment of Current Diets: Recent Trends by Income and Region](#). Working Paper #4 for the Global Panel on Agriculture and Food Systems, London.
- Lele U., W.A. Masters, J. Kinabo, J.V. Meenakshi, B. Ramaswami, and J. Tagwireyi, 2016. [Measuring Food and Nutrition Security: An Independent Technical Assessment and User's Guide for Existing Indicators](#), at the Food Security Information Network. FAO, Rome.
- Kazianga, H., W.A. Masters, and M. McMillan, 2013. [Disease Control, Demographic Change and Institutional Development in Africa](#). NBER Working Paper 19245. Cambridge, MA: NBER (July).
- Masters, W.A., D. Sarpong, and J. Kuwornu, 2011. [Improving child nutrition through quality certification of infant foods: scoping study from a randomized trial in Ghana](#). Working Paper 10/0828. London, UK: International Growth Centre.
- Masters, W.A. and B. Delbecq, 2008. [Accelerating innovation with prize rewards](#). IFPRI Discussion Paper 835, December, 44 pages.
- Masters, W.A. and T. Bedingar, 1999. [The Impact of Agricultural Research: A Synthesis of Findings and Policy Implications for the Sahel](#). *Les Monographies Saheliennes* No. 9, Institut du Sahel, Bamako, Mali, 36 pages.

- Masters, W.A.**, 1998. Impact de la Recherche Agricole en Afrique et au Sahel. *Etudes et recherches sahéliennes/Sahelian Studies and Research*, Institut du Sahel, Bamako, Mali, no. 1, June: 7-8.
- Fisher M.G., W.A. Masters*, and M. Sidibé, 1998. Technical Change in Senegal's Irrigated Rice Sector. *Etudes et recherches sahéliennes/Sahelian Studies and Research*, Institut du Sahel, Bamako, Mali, no. 1, June: 21-32.
- Masters, W.A.** and *J. Edwin*, 1998. Returns to Rice Technology Development in Sierra Leone. *Etudes et recherches sahéliennes/Sahelian Studies and Research*, Institut du Sahel, Bamako, Mali, no. 1, June: 67-74.
- Oehmke, J.F., P. Anandajayasekeram, and **W.A. Masters**, 1997. Agricultural Technology Development and Transfer in Africa. Sustainable Development Technical Paper No. 77, November. Washington, DC: USAID, 56 pages.
- Masters, W.A.**, G. Mutangadura, T. Chamboko, L. Sibanda, C. Dzama, and E.A. Attwood, 1991. Second Annual Report of Farm Management Data for Communal Area Farm Units, 1990/91 Farming Season. Harare: Government of Zimbabwe, Ministry of Lands, Agriculture and Rural Resettlement, 68 pages.
- Masters, W.A.**, A. Phiri, G. Mutangadura, T. Chamboko, and E.A. Attwood, 1990. First Annual Report of Farm Management Data for Communal Area Farm Units, 1989/90 Farming Season. Harare: Government of Zimbabwe, Ministry of Lands, Agriculture and Rural Resettlement, 85 pages.
- Masters, W.A.**, 1990. The Value of Foreign Exchange in Zimbabwe. Working Paper AEE 1/90. Harare: Univ. of Zimbabwe, Dept. of Ag. Economics and Extension, 46 pages.
- Masters, W.A.**, 1989. The Policy Analysis Matrix in Zimbabwe: A Methodological Introduction. Working Paper AEE 6/89. Harare: U. of Zimbabwe, Dept. of Ag. Economics and Extension, 45 Pages.

## **OUTREACH, PUBLIC ENGAGEMENT AND TEACHING MATERIALS**

- Teaching blog* on Food Economics, at <https://sites.tufts.edu/foodecon>
- Project site* on Food Prices for Nutrition, at <https://sites.tufts.edu/foodpricesfornutrition>
- Three billion people cannot afford a healthy diet* (2021), at TheConversation.com
- Retail food prices at purchasing power parity exchange rates* (2020), at World Bank data blog
- Can the world's poor afford a healthy diet?* (2019), at VoxDev.org
- SNAP: A Temporary, Fraud-Resistant, Family Friendly Policy* (2017), on Econofact.org
- Anti-Poverty Program at Stake in 2018 Farm Bill* (2017), on Econofact.org
- Keeping eggs affordable* (2016), on WBUR.org's *Cognoscenti* blog
- Planting the seeds of Africa's growth* (2010), on Project Syndicate
- Why are kiwis so cheap?* (2009), on Freakonomics.com.
- Market Failure: An Example From Africa* (2005), a 20-minute video on quality information for infant foods, as a [mini-lesson for Indiana high schools](#).
- Hands-On Econ* (1997), an early interactive textbook for applied microeconomics.
- I-TRADE* (1997), a face-to-face world-market simulation exercise for classroom use.
- Guidelines on National Comparative Advantage and Agricultural Trade* (1995), APAP Methods and Guidelines Series 40001. Bethesda, MD: Abt Associates (74 pages).

## EXTENSION AND TECHNICAL PUBLICATIONS

- W.A. Masters**, *The Economic Impact of Agricultural Research: A Practical Guide* (2003), with spreadsheet exercises; available in French with an earlier English version.
- Masters, W.A.**, September 2002. "Ateliers INSAH-Purdue sur l'impact économique de la recherche agricole au Sahel » (CD-ROM). <http://sites.tufts.edu/willmasters/research/impact>.
- Masters, W.A.**, 2000. "Global Trade Analysis for Southern Africa." *Southern Africa Update* 7(September), 4 pages. Published with *Trade and Industry Monitor*, 15 (September). Johannesburg: TIPS. Also published as EAGER Policy Brief 35 (January 2001).
- Masters, W.A.**, 1999. "The Uruguay Round: Impact on Africa." EAGER Policy Brief No. 20 (4 pages).
- Masters, W.A.**, 1998. "The Returns to Irrigated Cultivar Development in Senegal." WARDA Ex-Ante Impact Assessment Research Brief No. 1 (2 pages).
- Masters, W.A.** and J.D. Vitale, 1998. "Adoption et Impact des Technologies Agricoles: Modelisation en GAMS." Bamako, Mali: Institut du Sahel (53 pages plus diskette).
- Masters, W.A.**, 1997. "Impact Assessment of African Agricultural Technology Development and Transfer: Synthesis of Findings." USAID Policy Synthesis 28 (4 pages).
- Masters, W.A.**, 1990. "Dynamic Comparative Advantage of Sorghum and Millets in Zimbabwe". Consultant's Report to the SADCC/ICRISAT Sorghum and Millet Improvement Program. Bulawayo, Zimbabwe: SADCC/ICRISAT (202 pages).
- Masters, W.A.** and E.A. Nuppenau, 1990. "Regional Price Differences for Maize in Zimbabwe: A District-Level Analysis." Background Paper for the World Bank's Zimbabwe Agricultural Sector Memorandum. Harare: The World Bank (81 pages).
- Masters, W.A.**, A. Duncan, J. Gray, and R. Pearce, 1990. "Agricultural Marketing and Pricing in Zimbabwe." Background paper for the World Bank Agriculture Sector Memorandum. Oxford: Food Studies Group (179 pages).

## BOOK REVIEWS

- Review of [The Bottom Billion](#), by Paul Collier (2009), *American Journal of Agricultural Economics*, 91(4), 1157 - 1159.
- Review of [Global Warming and Agriculture](#), by William Cline (2008), *Journal of Economic Literature*, 66(2, June): 448-450.
- Review of [Liberaliser l'Agriculture Mondiale?](#) By J.-M. Boussard et al. (2006), *European Review of Agricultural Economics*, 33(3, September): 441-443.
- Review of [Global Crises, Global Solutions](#), edited by Bjørn Lomborg (2005), *Agricultural Economics*, 33(supplement): 529-530.
- Review of [Transforming Agrarian Economies](#) by T.P. Tomich, P. Kilby and B.F. Johnston (1996). *European Review of Agricultural Economics*, 23(3): 373-75.
- Review of [Agricultural Policies in Developing Countries](#) by Frank Ellis (1993). *American Journal of Agricultural Economics*, 75(2): 502-503, 1993.

**ONLINE AND IN-PERSON SHORT COURSES TAUGHT**

- Feeding a Hungry Planet* online course offered by the SDG Academy (2017- present)  
*Affordability of Nutritious Diets* (2019, 2020), at ANH Academy  
*Introduction to Economics for Agri-Health Researchers* (2017, 2018), at ANH Academy  
*Principles of Economics and Economics of Development* (half-semester courses at Deep Springs College, June-July 1998 and 2002).  
*Impact économique de la recherche agricole* (one or two-week workshops in Bamako 1994 & 1995; Niamey 1996, Ouagadougou 1997 & 1998, Praia 2000, Dakar 2002).  
*African short course in global trade analysis* (one week, Johannesburg, S.Africa 1998)  
*Impact de la recherche en Afrique* (all-day seminar, ENSA-Rennes, France 1999)

**GRANTS AND CONSULTANCIES**

Principal investigator or co-PI on over \$16 million in grants and projects from:

- |   |           |
|---|-----------|
| BMGF & UKAid: <a href="#">Food Prices for Nutrition</a>                                     | (2020- )  |
| UKAid: <a href="#">Innovative Methods &amp; Metrics for Agriculture-Nutrition Actions</a>   | (2014- )  |
| FAO: Trade Policy and Diet Costs in Africa and Worldwide                                    | (2021-22) |
| FAO: Methods and Data to Measure Healthy Diet Costs and Affordability                       | (2019-22) |
| USAID: Nutrition Transition and Agricultural Transformation                                 | (2015-22) |
| USAID: Learning Agenda for Uganda Development Food Security Activity                        | (2019-20) |
| BMGF: <a href="#">Changing Access to Nutritious Diets in Africa &amp; S. Asia (CANDASA)</a> | (2018-20) |
| IFPRI: Advancing Research in Nutrition and Agriculture (AReNA)                              | (2016-20) |
| USAID: United in Building & Advancing Life Expectations (UBALE)-Malawi                      | (2016-19) |
| World Bank: Seasonality and Smoothing of Nutrition Outcomes                                 | (2018)    |
| World Bank: Competitiveness of the Groundnut Value Chain - Senegal                          | (2016)    |
| GAIN: Nutritional Enhancement of the Peanut Value Chain in Ghana                            | (2013)    |
| IFPRI: Nutritional Composition of Complementary Infant Foods                                | (2012-14) |
| USAID: Nutrition Collaborative Research Support Program for Africa                          | (2010-15) |
| International Growth Center: Incentives for Innovation in Ethiopian Agriculture             | (2010-11) |
| International Growth Center: Quality Certification of Infant Foods - Ghana                  | (2009-11) |
| NBER Africa Project: Demographic Pressure and Institutional Change                          | (2008-10) |
| USDA: Graduate Fellowships in Agricultural Trade Policy                                     | (2006-10) |
| World Bank: Political Economy of Agricultural Distortions                                   | (2007-09) |
| World Bank: Distortions to Agricultural Incentives in Africa                                | (2006-08) |
| IFPRI: Using Prize Rewards to Accelerate Innovation in African Agriculture                  | (2006-08) |
| USAID: External Evaluation of the Forum for Agricultural Research in Africa                 | (2006)    |
| USAID: Rural and Agricultural Incomes with a Sustainable Environment-Plus                   | (2005-08) |
| Adelson Family Foundation: Supporting Prizes for Agricultural Innovation                    | (2004-06) |
| USAID: Biotechnology and Policy Change in West and Central Africa                           | (2004-05) |
| USDA: Sources of Global Agricultural Productivity Growth                                    | (2004-05) |
| IITA: Impact of Cocoa Marketing and Trade Innovations in Africa                             | (2002-04) |

USAID: Impact of Agricultural Technology in West and Central Africa	(1993-04)
ASARECA: Mid-Term Review of ECAPAPA policy-analysis network	(2001)
USAID: Modeling Electricity Trade in Southern Africa	(1998-01)
IFPRI: Market Reform and Agricultural Productivity in Malawi and Benin	(1998-00)
USAID: Equity and Growth through Economic Research (EAGER)	(1995-00)
UN Economic Commission for Africa: Global Trade Analysis	(1997-98)
U.S. Dept. of Education: Building Agribusiness Capacity	(1996-98)
USAID: Zimbabwe Grain Market Reform Research Project	(1994-96)
USAID: Agricultural Policy Analysis Project (APAP III)	(1994)
Purdue University: Global Initiative Faculty Grant for Teaching (twice)	(1992, 1993)
USAID/Zimbabwe: Consultancy on Grain Market Reform	(1992)
World Bank: Consultancy on Agricultural Pricing in Zimbabwe	(1991)
Rockefeller Foundation: Research Fellowship	(1990)
ICRISAT: Consultancy on Sorghum and Millets in Zimbabwe	(1989)