

HONDURAS

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KEY INDICATORS, 2006–2012

Total Agricultural Research Spending	2006		2009		2012
Lempira (million constant 2011 prices)	73.8		72.0		79.6
PPP dollars (million constant 2011 prices)	7.4	↓ -3%	7.3	↑ 11%	8.0
Overall Growth		-3%		11%	
Total Number of Agricultural Researchers					
Full-time equivalents (FTEs)	68.9	↓ -3%	66.7	↑ 31%	87.6
Overall Growth		-3%		31%	
Agricultural Research Intensity					
Spending as a share of agricultural GDP	0.22%		0.21%		0.17%
FTE researchers per 100,000 farmers	10.07		9.96		13.19

Notes: Research conducted by the private for-profit sector is excluded from this factsheet due to lack of available data. Acronyms, definitions, and an overview of agricultural R&D agencies are provided on page 4.

► Public agricultural spending levels and researcher numbers grew by about 25 percent during 2006–2012 due to substantial increases in funding and staff at DICTA, the country's main government agricultural research agency.

► At just 0.17 percent in 2012, the country's agricultural research intensity ratio (that is, agricultural R&D spending as a share of agricultural GDP) is extremely low.

► Given limited government support to agricultural R&D in Honduras, nongovernmental agencies play an important role. FHIA, the country's largest agricultural R&D agency, is funded through a combination of interest from an endowment fund, donor contributions, and revenues from the provision of laboratory and other services.

FINANCIAL RESOURCES, 2012

Spending Allocation

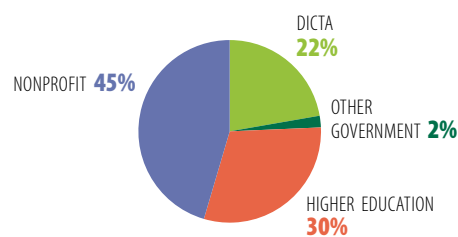
Salaries	74%
Operating and program costs	25%
Capital investments	1%

Funding Sources

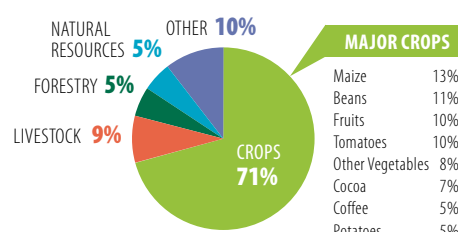
Government	87%
Donors	13%

Note: Shares are based on data for DICTA only.

INSTITUTIONAL PROFILE, 2012



RESEARCH FOCUS, 2012



Notes: Major crops include those that are the focus of at least 5 percent of all crop researchers; 31 percent of total crop researchers focused on a wide variety of other crops.

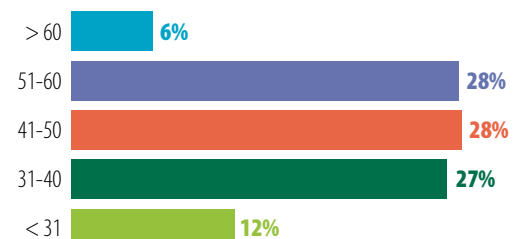
RESEARCHER PROFILE, 2012



Number by qualification (FTEs)



Share by age group (years)



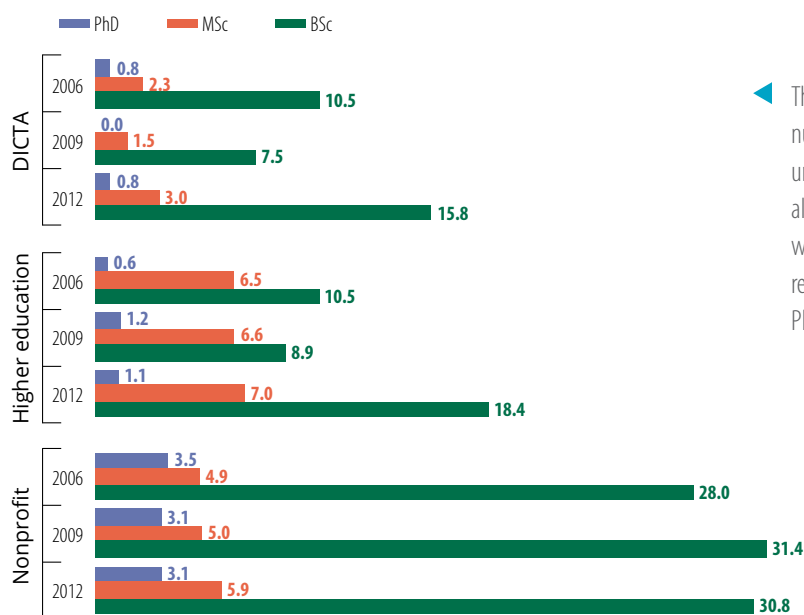
CHALLENGE

- ▶ Agricultural research agencies in Honduras employ an extremely limited number of researchers, most of whom are only qualified to the BSc-level. Few researchers have PhD degrees, and most of those who do are approaching retirement age. Limited funding, along with few national postgraduate training programs, constrain the professional development of the large number of junior, BSc-qualified researchers. Furthermore, external funding for training has become scarce since the Spanish government withdrew its support for PhD-level training.

POLICY OPTION

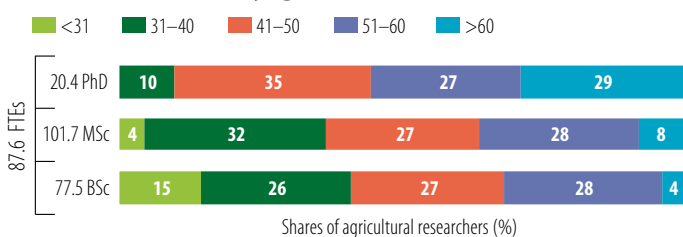
- ▶ Strengthening the capacity of the current pool of junior agricultural researchers should be an institutional and policy priority. Government commitments are needed to address structural issues in the higher education system—where staff is underqualified, and financial and other incentives are lacking—to enable national universities to offer a broader range of programs, disciplines, and subjects. In addition to more secure and consistent funding, the country's agencies also need a clearly defined and coordinated training and mentoring strategy for researchers.

Number of researchers by sector and qualification level, 2006, 2009, and 2012 (FTEs)



- ◀ The 2010 launch of a government program supporting farmers caused the total number of agricultural researchers to rise. New partnerships with international universities and research organizations, such as University of Nebraska and CIMMYT, also prompted additional staff recruitment. Most of the new researchers, however, were only qualified to the BSc-degree level. The absolute number of PhD-qualified researchers remain very low. As of 2012, DICTA and FHIA only employed 1 and 2 PhD-qualified researchers, respectively (in FTEs).

Number of researchers by age bracket, 2012



- ◀ As of 2012, more than half the PhD-qualified researchers employed in Honduras were over 50 years of age. In contrast, 41 and 36 percent of the BSc- and MSc-qualified researchers, respectively, were in their twenties or thirties.

CROSS-COUNTRY COMPARISONS OF KEY INDICATORS

	Total number of researchers, 2012 (FTEs)	Growth in number of researchers, 2009–2012	Share of PhD researchers, 2012 (FTEs)
Honduras	87.6	31%	6%
Guatemala	141.8	27%	10%
Dominican Republic	199.6	3%	10%
Panama	133.0	1%	8%

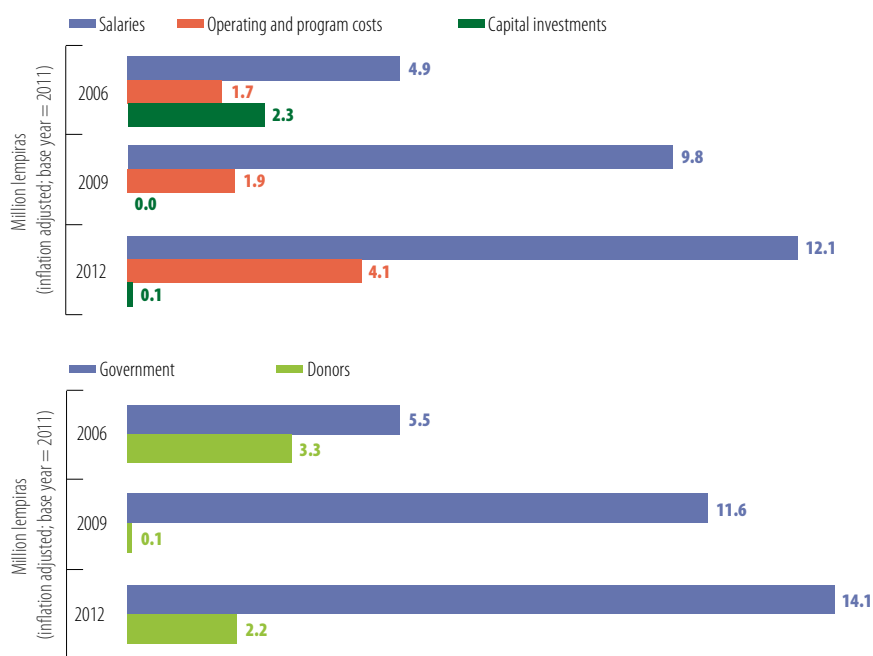
CHALLENGE

- ▶ Government funding to DICTA has increased in recent years due to higher salary and operating costs; nevertheless, funding disbursements have been irregular, both in terms of amounts and timing. Funding for DICTA's actual research activities is mostly derived from donors, such as the Food and Agriculture Organization of the United Nations and the Andalusian Agency for International Development Cooperation. Contributions have been small and volatile, however, in part due to the prioritization of technology transfer over research.

Government funding to DICTA rose during 2006–2012 to support the Directorate's increased salary bill stemming from growth in the number of researchers and substantial increases in salary levels. Most of the current infrastructure and research equipment was acquired during the 1970s and 1980s and hence is rundown and outdated; despite this, less than 1 percent of total spending was allocated to capital expenditures in 2012. Donor contributions to DICTA, which are generally allocated to operating and research-related costs, have been low and highly volatile over time.



DICTA's total spending by cost category and funding by source, 2006, 2009, and 2012



POLICY OPTION

- ▶ Despite high poverty rates, especially in rural areas, Honduras's favorable climate and natural resource base offer significant potential for agricultural growth. For this potential to be realized, however, substantial funding increases are needed, combined with well-targeted investments and sound government policies.

▶ EVOLVING PUBLIC–PRIVATE COOPERATION

Twenty years after its establishment, FHIA is widely regarded as a successful example of innovative public–private cooperation, given that it conducts agricultural research of national relevance, but also raises revenues by conducting contract-based research. The foundation was established as a nonprofit entity with the dual goals of strengthening technology generation, validation, and dissemination to the Honduran agricultural sector and diversifying agricultural production for domestic and export markets. FHIA is partly funded from interest accrued on an endowment fund established by USAID in the mid-1980s; more recently it has achieved financial sustainability by providing research services, technology transfer, and technical assistance to a broad range of clients, including smallholder farmers and national, regional, and international partners, including CIDA, USAID, CATIE, and SECO. CIDA, for example, provides US\$10 million per year to FHIA to conduct research on key commodities, such as cocoa, which is a strategic export crop with the potential to improve smallholder incomes and national food security. Other crops relevant to the country's national food security have not attracted the same level of donor interest. In alignment with national strategic priorities, FHIA allocates its internally generated revenues to agricultural R&D focusing on key commodities with export potential, such as bananas and plantains.

CROSS-COUNTRY COMPARISONS OF KEY INDICATORS *continued*

	Total spending, 2012 (million 2011 PPP dollars)	Overall spending growth, 2009–2012	Spending as a share of AgGDP, 2012
Honduras	8.0	11%	0.17%
Guatemala	15.6	30%	0.14%
Dominican Republic	20.4	4%	0.30%
Panama	15.5	-3%	0.74%

OVERVIEW OF HONDURAS AGRICULTURAL RESEARCH AGENCIES

Ten public agencies conduct agricultural R&D in Honduras. The main government agency, DICTA (employing 20 FTE researchers in 2012), accounts for only 12 percent of the countries agricultural researchers and focuses on crop improvement, livestock, agronomy, food security, and rural development. The other government agency, the Lancetilla Botanical Garden and Research Center (2 FTEs in 2012). The higher education sector includes four agencies: the National University of Agriculture (16 FTEs); the Regional University Center of the Atlantic Littoral (7 FTEs) and the Faculty of Science (1 FTE) under the National Autonomous University of Honduras; and the National School of Forestry Science (3 FTEs). The Panamerican School of Agriculture, Zamorano, trains students from all over Latin-America and receives substantial private and international donor funding to conduct development-oriented agricultural research of relevance to Honduras; because of its regional status, however, the school is not included in the analysis presented in this factsheet. Four nonprofit agencies conduct a significant share of the country's agricultural research. FHIA is not only the country's largest nonprofit agency, but also its largest agricultural research agency in terms of agricultural researchers (30 FTEs). FHIA comprises three research centers that focus on cocoa, agroforestry, and horticultural research. Other nonprofit entities in Honduras include FIPAH (7 FTEs), IHCAFE (2 FTEs), and FUNDER (0.4 FTEs). Research conducted by private for-profit sector in Honduras is minimal.



Note: Excludes private for-profit agencies.

 For a complete list of the agencies included in ASTI's dataset for Honduras, visit www.asti.cgiar.org/honduras.

ASTI DATA PROCEDURES AND METHODOLOGIES

- ▶ The **data underlying this factsheet** were predominantly derived through primary surveys, although some data were drawn from secondary sources or were estimated.
- ▶ **Agricultural research** includes research conducted by the government, higher education, and nonprofit sectors; Research conducted by the private for-profit sector is excluded due to lack of available data.
- ▶ ASTI bases its calculations of human resource and financial data on **full-time equivalent (FTE) researchers**, which take into account the proportion of time staff actually spend on research compared with other activities.
- ▶ ASTI presents its financial data in 2011 local currencies and **2011 purchasing power parity (PPP) dollars**. PPPs reflect the relative purchasing power of currencies more effectively than do standard exchange rates because they compare prices of a broader range of local—as opposed to internationally traded—goods and services.
- ▶ ASTI estimates the **higher education sector's research expenditures** because it is not possible to isolate them from the sector's other expenditures.
- ▶ Note that, due to **decimal rounding**, the percentages presented can sum to more than 100.

 For more information on ASTI's data procedures and methodology, visit www.asti.cgiar.org/methodology; for more information on agricultural R&D in Honduras, visit www.asti.cgiar.org/honduras.

ACRONYMS USED IN THIS FACTSHEET

CATIE	Tropical Agricultural Research and Higher Education Center
CIDA	Canadian International Development Agency
CIMMYT	International Maize and Wheat Improvement Center
DICTA	Directorate of Science and Agricultural Technology
FHIA	Honduran Foundation for Agricultural Research
FIPAH	Foundation for Participatory Agricultural Research
FTE(s)	Full-time equivalent (researchers)
FUNDER	Foundation for Rural Enterprise Development
IHCAFE	Honduran Institute of Coffee
PPP(s)	Purchasing power parity (exchange rates)
R&D	Research and development
UNA	National University of Agriculture
SECO	Swiss State Secretariat for Economic Affairs
USAID	United States Agency for International Development

ABOUT ASTI, IFPRI, AND DICTA

Working through collaborative alliances with numerous national and regional R&D agencies and international institutions, **Agricultural Science and Technology Indicators (ASTI)** is a comprehensive and trusted source of information on agricultural R&D systems across the developing world. ASTI is led by the **International Food Policy Research Institute (IFPRI)**, which—as a CGIAR member—provides evidence-based policy solutions to sustainably end hunger and malnutrition and reduce poverty. The **Directorate of Science and Agricultural Technology (DICTA)** falls under the Secretariat of Agriculture and Livestock (SAG) and is the principal agricultural research agency in Honduras; DICTA focuses on crop improvement, livestock, agronomy, food security, and rural development.

ASTI/IFPRI and DICTA gratefully acknowledge participating agricultural R&D agencies for their contributions to the data collection and preparation of this country factsheet. ASTI also thanks the Canada Department of Foreign Affairs, Trade, and Development for its generous support of ASTI's work in Central America and the Caribbean. This factsheet has been prepared as an ASTI output and has not been peer reviewed; any opinions are those of the authors and do not necessarily reflect the policies or opinions of IFPRI or DICTA.