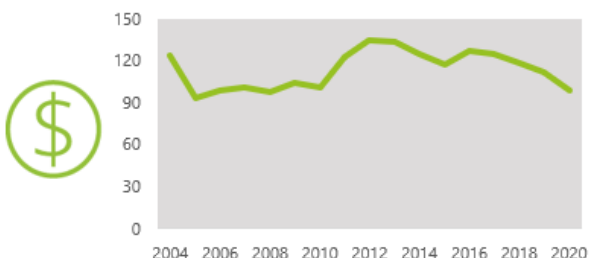


HONDURAS

Gert-Jan Stads and Luis de los Santos

AGRICULTURAL RESEARCH SPENDING



Million lempiras
(2017 constant prices)

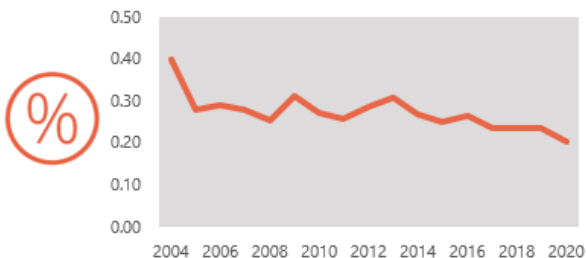
99.0

Million PPP dollars
(2017 constant prices)

9.8

	HONDURAS	GUATEMALA	COSTA RICA	PANAMA
Million lempiras (2017 constant prices)	99.0			
Million PPP dollars (2017 constant prices)	9.8	14.4	38.1	33.6

SPENDING INTENSITY

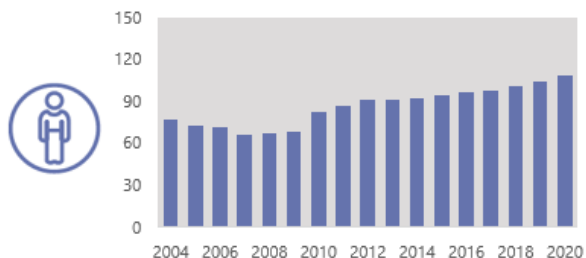


Agricultural research
spending as a % of
agricultural GDP

0.20%

	HONDURAS	GUATEMALA	COSTA RICA	PANAMA
Agricultural research spending as a % of agricultural GDP	0.20%	0.10%	0.87%	1.12%

AGRICULTURAL RESEARCHERS



Full-time equivalents

109.1

	HONDURAS	GUATEMALA	COSTA RICA	PANAMA
Full-time equivalents	109.1	154.3	237.7	184.3

Volatile R&D spending

Agricultural R&D expenditures in Honduras demonstrate considerable year-to-year fluctuations, not in the least due to the relatively short-term nature of donor funding on which some of the country's principal agricultural R&D agencies are heavily dependent. In 2020, the country invested only 0.20 percent of its agricultural GDP in agricultural research, which is too low to effectively address farm productivity and other challenges of the rural poor.

Low public R&D involvement

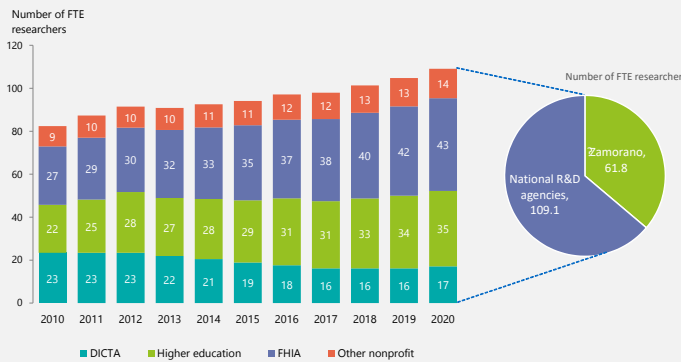
Given limited government support to agricultural R&D in Honduras, nongovernmental agencies play an important role in the country's national agricultural research system. FHIA is the country's largest agricultural R&D agency, and it is funded through a combination of interest from an endowment fund, donor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

Capacity challenges

Despite a gradual increase in the number of agricultural researchers over the past decade, most Honduran researchers are only qualified to the BSc-level. Few researchers have PhD degrees, and many 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 BSc-qualified researchers.

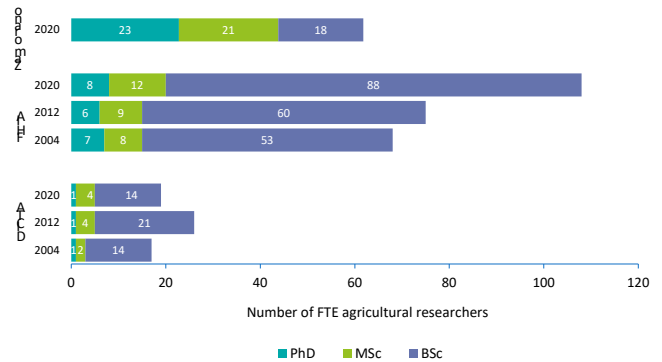
Institutional composition of Honduran agricultural research

Unlike most Central American countries where government agencies and universities are the main players in national agricultural R&D, the Honduran agricultural research system is characterized by a strong representation of the private nonprofit sector. The country's national agricultural research institute, DICTA, is relatively small. FHIA, the main nonprofit agency, is a strong player in banana and plantain, cocoa, agroforestry, and horticultural research. Despite being located in Honduras, Zamorano is a Pan-American school with regional status. Given that it is technically not a Honduran R&D agency, data for Zamorano are excluded in country totals for Honduras throughout this brief. However, Zamorano is larger than any individual Honduran agricultural R&D agency in terms of research staff.



Honduran agricultural researchers by qualification level

Agricultural research agencies in Honduras employ a limited number of researchers, the bulk of whom are only qualified to the BSc-level. Few researchers have PhD or MSc degrees, and many of those who do are approaching retirement age (see graph below). Limited funding, along with few national postgraduate training programs, constrain the professional development of the large number of junior, BSc-qualified researchers. Compared to DICTA and FHIA, average qualification levels of scientists at Zamorano are considerably higher.



Honduran agricultural researchers broken down by gender

In 2020, 22 percent of Honduran agricultural researchers were women, a significant improvement over the 14-percent share recorded in 2012. Female participation in agricultural R&D was much higher at the country's nonprofit agencies (FHIA and IHCAFE) than at DICTA. However, as of 2020, none of FHIA's researchers with PhD degrees were women. These indicators suggest that, notwithstanding positive developments in the overall participation rate of women, Honduras still has a long way ahead to achieve true gender balance in the staffing of its agricultural research system.

78%
MALE



22%
FEMALE

By main agricultural R&D agencies, 2020

DICTA	11%
FHIA	27%
IHCAFE	24%

Researchers by qualification level and age bracket

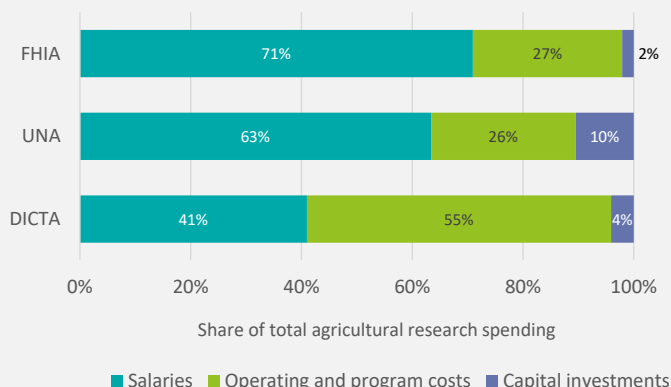
Overall, close to 70 percent of DICTA's researchers are in their fifties and approaching the mandatory retirement age. Strengthening the capacity of the current pool of junior agricultural researchers should therefore be an institutional and policy priority. Zamorano has a much more balanced distribution of scientists across age brackets. While the Pan-American agricultural school's staff with BSc and MSc degrees are in their thirties or forties, its PhD-qualified staff are in their forties or fifties.



Agricultural R&D spending broken down by cost category

The breakdown of agricultural research expenditures by cost categories differs considerably from one Honduran agricultural R&D agency to the next. While the bulk of FHIA's and UNA's expenditures is directed to salary costs, operating and program costs are the principal cost items at DICTA. Compared to FHIA and UNA, DICTA's research programs are highly dependent on external donor funding.

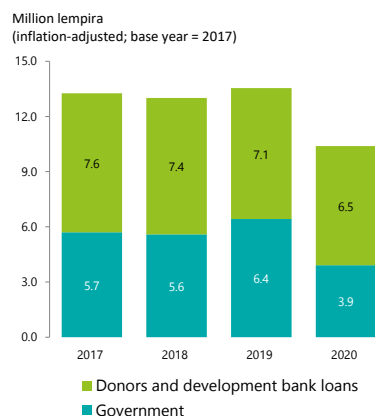
2017-2020 averages



Agricultural R&D funding broken down by source

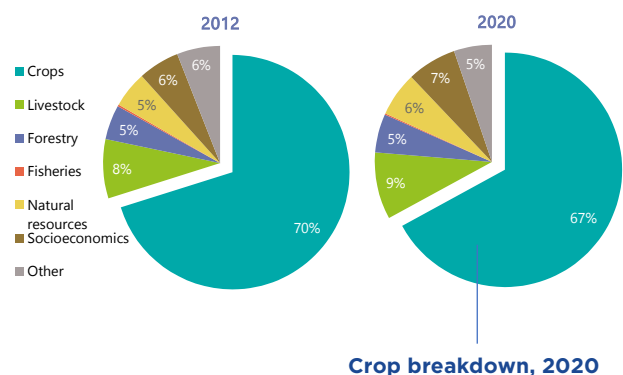
Government funding to DICTA has been low and irregular over time, covering little more than the institute's salary bill. Funding for actual research activities is mostly derived from foreign donors, including the governments of Canada, Sweden, Spain, South Korea, and Andalusia, as well as HarvestPlus. In contrast, 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.

DICTA's funding broken down by source, 2017-2020



Commodity focus of Honduran agricultural researchers

In 2020, two-thirds of Honduran agricultural researchers focused their research on crops. The remaining researchers concentrated their research on livestock, forestry, fisheries, natural resources, socioeconomics, and other areas. The country's most researched crops include vegetables, maize, beans, coffee, and cocoa.



Crop breakdown, 2020

Cereals	8%
Roots and tubers	9%
Pulses	8%
Oil-bearing crops	6%
Horticultural crops	20%
Other crops	16%

New crop varieties released, 2017-2020

During 2017-2020, DICTA released ten new crop varieties, all of which were potato or sweet potato varieties with boosted nutritional content. FHIA has released a large number of improved banana, plantain, and cocoa varieties over the past decades, but in more recent years, the agency's main focus has been on technology transfer. Just a single cocoa variety (Clon FHIA-612) was released by FHIA over the 2017-2020 period.

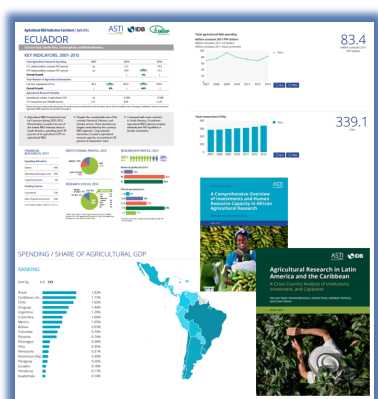
New crop varieties released by DICTA, 2017-2020

Variety name	Crop type	Year of release	Protection mechanism
DICTA Ktracho	Sweet potato	2019	None
DICTA Ceibeño	Sweet potato	2019	None
DICTA Pacífico	Sweet potato	2019	None
DICTA Santa Cruz	Sweet potato	2019	None
DICTA vitAplus	Sweet potato	2019	None
DICTA FL Honduras	Sweet potato	2019	None
Arizona	Potato	2019	None
Sanatana	Potato	2019	None
El Mundo	Potato	2019	None
Everst	Potato	2019	None

ASTI RESOURCES FOR HONDURAS

This factsheet presents recent data on the agricultural research system of Honduras, primarily focusing on key financial, human resource, institutional, and output indicators, while also highlighting relevant trends, challenges, and institutional changes. Additional resources are available at www.asti.cgiar.org and include:

- ASTI's **interactive country page** for Honduras features national agricultural research investment and capacity data, a data exploration and download tool, as well as access to a variety of country publications.
- ASTI's **benchmarking tool** allows key agricultural research indicators to be ranked and compared across Latin American countries.
- ASTI's **data download tool** provides access to more in-depth ASTI datasets and graphs for Honduras and many other countries.
- ASTI's **agency directory** provides an overview of agencies involved in agricultural research in Honduras, along with their location and key agency-level indicators.



ASTI DATA PROCEDURES AND METHODOLOGY

The data underlying this factsheet were derived through detailed primary surveys from the country's principal agricultural R&D agencies. Data from smaller R&D agencies 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 incomplete data coverage.

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 (non-research) activities.

ASTI presents its financial data in 2017 local currencies and 2017 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 decimal rounding can cause totals to be one point higher or lower than the sum of their parts.

For more information on ASTI's data procedures and methodology, visit:

www.asti.cgiar.org/methodology

ACRONYMS USED IN THIS FACTSHEET

ASTI	Agricultural Science and Technology Indicators	PPP	purchasing power parity (exchange rate)
CATIE	Topical Agricultural Research and Higher Education Center	R&D	research and development
CIDA	Canadian International Development Agency	SECO	Swiss State Secretariat for Economic Affairs
DICTA	Directorate of Science and Agricultural Technology	UNA	National University of Agriculture
FHIA	Honduran Foundation for Agricultural Research	USAID	United States Agency for International Development
FTEs	full-time equivalent(s)		
GDP	gross domestic product		
IDB	Inter-American Development Bank		
IFPRI	International Food Policy Research Institute		
IHCAFE	Honduran Institute of Coffee		

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The Inter-American Development Bank would like to acknowledge the **International Food Policy Research Institute (IFPRI)**.

Working through collaborative alliances with numerous national and regional R&D agencies and international institutions, ASTI is a comprehensive and trusted source of information on agricultural R&D systems across the developing world. ASTI is facilitated by the International Food Policy Research Institute (IFPRI). DICTA coordinated in-country data collection. For more information on ASTI, please visit www.asti.cgiar.org/about

ASTI gratefully acknowledges participating agricultural R&D agencies for their contributions to the data collection and preparation of this country factsheet. They also thank the Inter-American Development Bank (IDB) for its generous support of ASTI's work in Latin America.

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