ASTI led by IFPRI

DOMINICAN REPUBLIC

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KEY INDICATORS, 2006–2012

Total Agricultural Research Spending	2006		2009		2012
Dominican peso (million constant 2011 prices)	524.0		380.3		396.2
PPP dollars (million constant 2011 prices)	26.9	▼	19.6	▲	20.4
Overall Growth	|	**–27%**	|	**4%**	|
Total Number of Agricultural Researchers					
Full-time equivalents (FTEs)	131.3	▲	194.5	▲	199.6
Overall Growth	|	**48%**	|	**3%**	|
Agricultural Research Intensity					
Spending as a share of agricultural GDP	0.45%		0.31%		0.30%
FTE researchers per 100,000 farmers	26.15		41.30		45.15

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.

- Agricultural research spending decreased by 24 percent in inflation-adjusted terms during 2006–2012. Moreover, at just 0.30 percent in 2012, the country's agricultural research intensity ratio (agricultural R&D spending as a share of AgGDP) falls well below the 1-percent target recommended by the United Nations.
- Agricultural R&D in the Dominican Republic is primarily funded by the government. Donors make a small but important contribution to the cost of research activities, although this support was nonexistent in 2010 and 2012.
- The country's total number of agricultural researchers increased by about half during 2006–2012. The number of researchers qualified to the PhD level remained quite low, however, and half of them were nearing retirement age as of 2012.

FINANCIAL RESOURCES, 2012

Spending Allocation

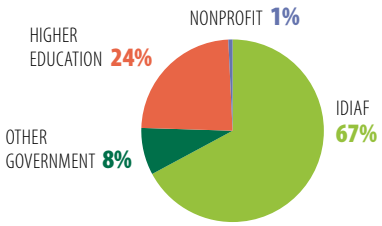
Salaries	67%
Operating and program costs	29%
Capital investments	4%

Funding Sources

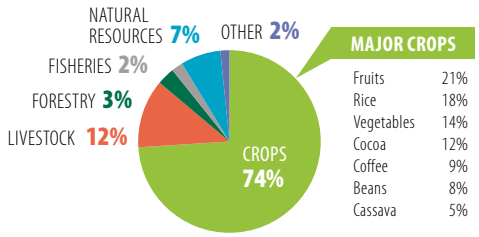
Government	91%
Sales of goods and services	9%

Note: Shares are based on data for IDIAF only.

INSTITUTIONAL PROFILE, 2012



RESEARCH FOCUS, 2012

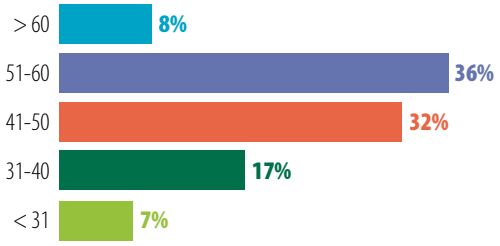


Notes: Major crops include those that are the focus of at least 5 percent of all crop researchers; 13 percent of total crop researchers focused on a wide variety of other crops.

RESEARCHER PROFILE, 2012

Number by qualification (FTEs)

Share by age group (years)



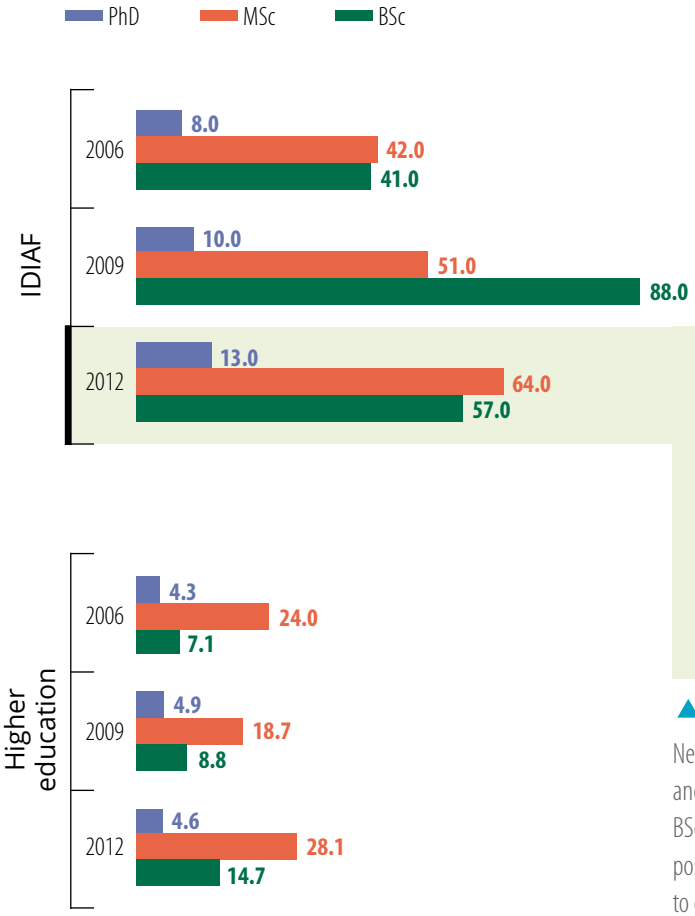
CHALLENGE

- Although IDIAF employed more than half the country's agricultural researchers in 2012, the vast majority of them were only qualified to the BSc- or MSc-degree level. IDIAF has difficulty attracting staff, especially at the PhD level, because agencies in the higher education sector and other fields offer higher salary levels. Moreover, many of the institute's senior staff are nearing retirement age.

POLICY RESPONSE

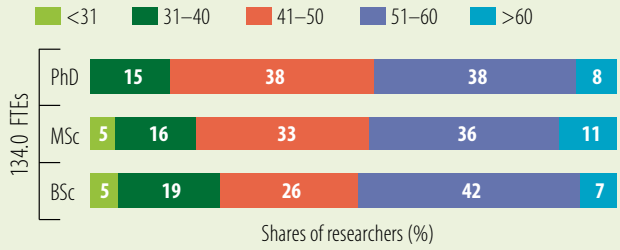
- Strategic action is being taken to provide researchers with PhD training and to address the disproportionately low number of senior researchers to their junior colleagues. Nevertheless, unless IDIAF can improve its salary packages, working conditions, and other incentives, retaining and motivating staff and gaining their long-term commitment will be an ongoing challenge.

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



Despite overall growth in the number of agricultural researchers employed at IDIAF during 2006-2012, the number of researchers with PhD degrees increased only slightly. The number of PhD-qualified researchers in the higher education sector also remained low. This in part reflects the attraction of careers in areas other than agricultural research, potentially based on higher salaries, opportunities, and other incentives.

Distribution of researchers by age bracket at IDIAF, 2012



Nearly half of all agricultural researchers employed at IDIAF in 2012 were over 50 years old, and the age distribution was similar across degree categories, which is unusual (generally, BSc-qualified researchers tend to be younger, and PhD-qualified researchers older). On a positive note, retirement at 60 years of age is not mandatory, and many researchers choose to continue their employment past this age, which will give the institute additional time to build and consolidate its pool of researchers if the current challenges can be overcome.

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)
Dominican Republic	**199.6**	**3%**	**10%**
Guatemala	141.8	27%	10%
Honduras	87.6	31%	6%
Panama	133.0	1%	8%

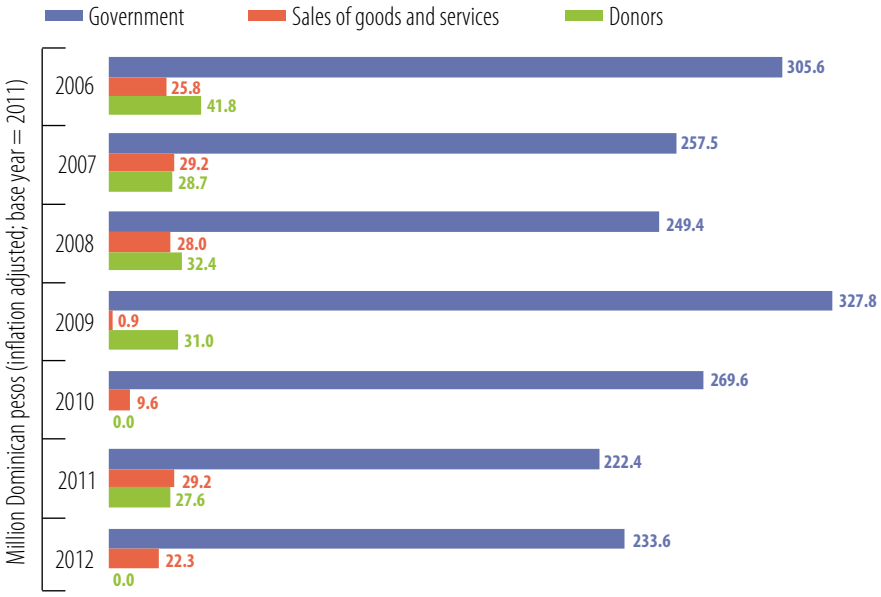
CHALLENGE

- Agricultural R&D spending decreased considerably at IDIAF during 2006–2012 (in inflation-adjusted terms). Although budget cuts were avoided, funding levels failed to keep pace with rising inflation. In addition, donor funding was highly volatile during this period (in fact, completely lacking in both 2010 and 2012). Donor contributions are an important source of funds for research programs, as government funds are allocated to the costs of salaries and day to day operation of the institute.

OBSERVATION

- The National System of Agricultural Research and Forestry was created in 2012 and is expected to facilitate consolidation and coordination of the country's agricultural research initiatives. Nonetheless, if it is to successfully implement the strategic plan for science and technology, IDIAF will require higher and consistent levels of government funding to support its daily operations, ensure the viability of its research activities, and enable necessary maintenance of and upgrades to its infrastructure and equipment.

IDIAF's funding by source, 2006–2012



IDIAF received no donor funding in 2010 and 2012, but in other years bilateral funding from Japan, Spain, Taiwan combined constituted about 8 percent of the total on average. The Spanish Agency for International Cooperation and Development, for example, supported two consecutive initiatives in the Dominican Republic in the past decade—PROTESUR (2005–2008) and PRODESUR (2010–2014)—both of which promoted regional agricultural research and technology transfer at IDIAF.

OPPORTUNITIES STEMMING FROM NEW DONOR COOPERATION

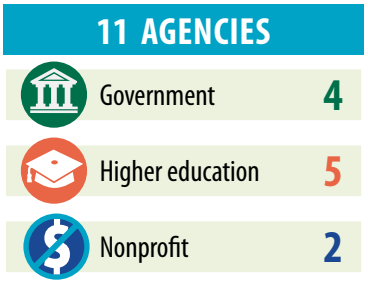
A US$24 million loan from the Interamerican Development Bank is in its final stages of approval. The loan will fund the Program for Agricultural Research and Development, which is intended to increase agricultural productivity in the Dominican Republic by strengthening the national capacity to generate and transfer agricultural technologies. Funding will be invested in laboratory facilities, research equipment, and training for researchers, as well as establishing global S&T cooperation. US$19 million will be allocated to strategic research areas, including adaptive experimentation and innovation. With a starting budget of US$3 million, strengthening IDIAF's institutional capacity is a secondary goal, along with increasing IDIAF's capacity to generate revenues internally, monitoring the adoption of technologies, and intellectual property management.

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
Dominican Republic	**20.4**	**4%**	**0.30%**
Guatemala	15.6	30%	0.14%
Honduras	8.0	11%	0.17%
Panama	15.5	–3%	0.74%

OVERVIEW OF THE DOMINICAN REPUBLIC'S AGRICULTURAL RESEARCH AGENCIES

Eleven agencies conduct agricultural R&D in Dominican Republic. IDIAF (employing 134 FTE researchers in 2012) is the country's largest agency, accounting for roughly half of all agricultural researchers (in FTEs). IDIAF conducts research on crops, biodiversity and natural resources management, food security, and rural development. Other government agencies include the Mango Cluster (0.3 FTEs in 2012), the Institute of Innovation in Biotechnology and Industry (9 FTEs), and the Center for the Sustainable Management of the Hydraulic Resources in the Caribbean Insular States of the Dominican Institute of Hydraulic Resources (7 FTEs). The higher education sector includes five agencies, the largest of which are the Higher Institute of Agriculture University (24 FTEs) and the Faculty of Agronomy and Veterinary Science of the Autonomous University of Santo Domingo (19 FTEs). Two nonprofit agencies, INTABACO and Dominican Apicultural Network, conduct limited agricultural research. A number of private-for-profit companies also conduct agricultural research in the Dominican Republic—such as at the Central Romana Corporation (18 FTEs), which focuses on sugar research; it is estimated that in 2012 these entities accounted for a combined total of about 10 percent of the country's agricultural researchers (in FTEs).



Note: Excludes private for-profit agencies.

For a complete list of the agencies included in ASTI's dataset for the Dominican Republic, visit **www.asti.cgiar.org/dominican_republic**.

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 the Dominican Republic, visit* **www.asti.cgiar.org/dominican_republic**.

ACRONYMS USED IN THIS FACTSHEET

AgGDP	Agricultural gross domestic product
IDIAF	Dominican Institute of Agricultural and Forestry Research
FTE(s)	Full-time equivalent (researchers)
PPP(s)	Purchasing power parity (exchange rates)
PRODESUR	Program for Rural Development
PROTESUR	Program for the Agricultural Technological Development of the South
R&D	Research and development
S&T	Science and technology

ABOUT ASTI, IFPRI, AND IDIAF

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 **Dominican Institute of Agricultural and Forestry Research (IDIAF)** is the Dominican Republic's principal agricultural research agency. The institute falls under the Ministry of Agriculture and focuses on crops, biodiversity and natural resources management, food security, and rural development.

ASTI/IFPRI and IDIAF 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 IDIAF.