Agricultural R&D Indicators Factsheet | March 2017

REPUBLIC OF CONGO

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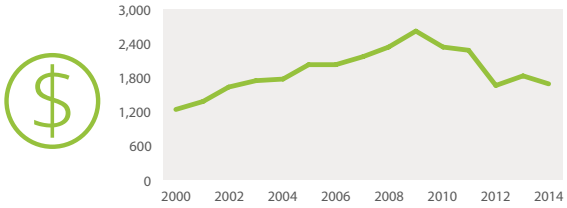
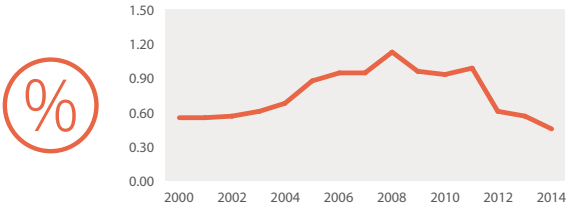
AGRICULTURAL RESEARCH SPENDING



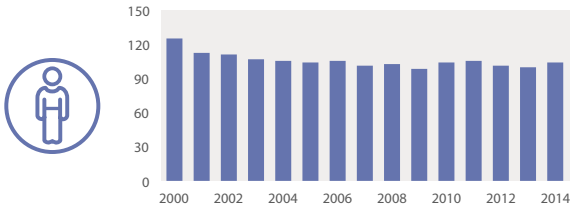
	REP. CONGO	CAMEROON	DR CONGO	CÔTE D'IVOIRE
Million CFA francs (2011 constant prices)	1,674.2			
Million PPP dollars (2011 constant prices)	5.8	45.9	36.5	82.1

SPENDING INTENSITY



Agricultural research spending as a share of AgGDP	0.44%	0.34%	0.34%	0.53%

AGRICULTURAL RESEARCHERS



Full-time equivalents	104.2	240.1	512.8	253.2
Share of researchers with MSc and PhD degrees	88%	85%	40%	99%

Notes: Data above are for 2014. Research conducted by the private for-profit sector is excluded from this factsheet due to lack of available data. Information on access to further resources, data procedures and methodologies, and acronyms and definitions are provided on Page 4. See **www.asti.cgiar.org/republic-of-congo/directory** for an overview of Republic of Congo's agricultural R&D agencies.

Declining spending

Economic constraints caused by declining global oil prices have had a negative impact on agricultural research spending in Congo in recent years. Between 2008 and 2014, spending declined by 28 percent, reversing the previously positive trend. In 2014, the country invested just 0.44 percent of its AgGDP in agricultural research, which is well below the minimum target of 1 percent recommended by the African Union and United Nations.

Institutional consolidation

The consolidation of DGRST's numerous research centers to form the National Agricultural Research Institute (IRA), Forestry Research Institute (IRF), and Natural Sciences Institute (IRSEN) is expected to enhance the coordination and efficiency of research efforts in Congo, as well as improve staff retention and assist recruitment. The government approved the creation of these institutes in 2012, and the new institutes commenced operations in March 2014.

Dwindling capacity

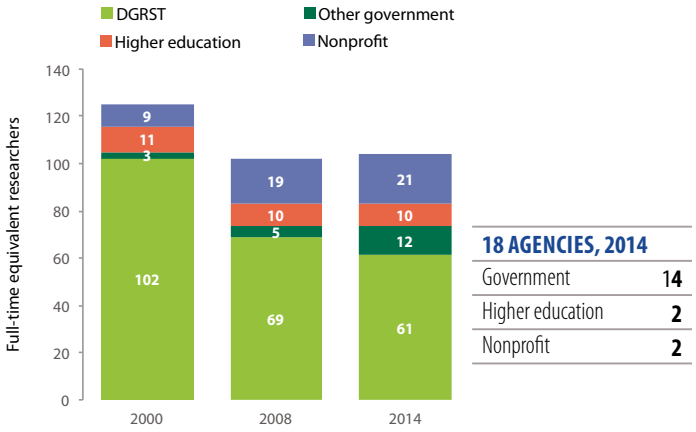
Between 2000 and 2014, the number of agricultural researchers employed at DGRST's centers fell by one-third due to staff retirement and attrition for other reasons, including low salary levels compared with the higher education sector. A long-term public-sector recruitment ban prevented the vacant positions from being filled. Consequently, the centers' share of the country's agricultural researchers declined from 82 percent in 2000 to 59 percent in 2014.

Aging researchers

As of 2014, almost 60 percent of Congo's agricultural researchers were over the age of 50, which is one of the highest shares among African countries. The share was even larger for PhD-qualified researchers (78 percent). With the ongoing civil service hiring freeze and an aging pool of agricultural researchers, capacity will only be further eroded over time. Maintaining a critical mass of agricultural scientists will be imperative to meeting the country's agricultural development goals through effective research.

Institutional composition of Congo's agricultural research

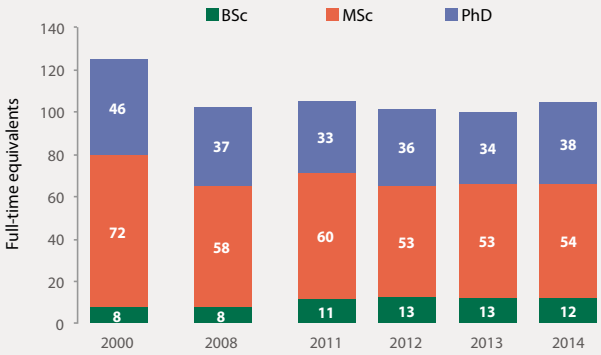
Overall, the number of agricultural researchers in Congo decreased by 17 percent between 2000 and 2014, largely driven by staff retirements and resignations combined with a recruiting ban at the DGRST centers. In contrast, the number of researchers employed at non-DGRST government agencies and in the nonprofit sector increased during this timeframe.



18 AGENCIES, 2014	
Government	14
Higher education	2
Nonprofit	2

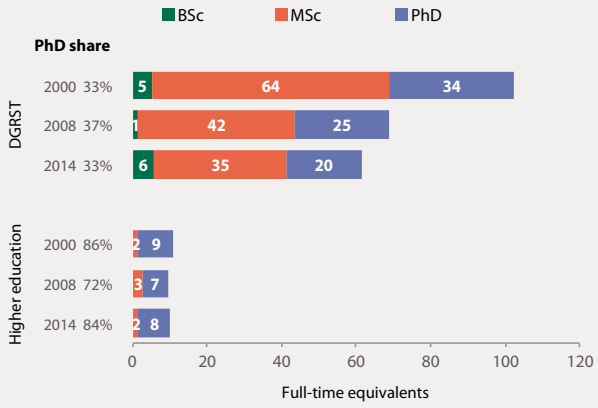
Congo's agricultural researchers by qualification level

The total number of agricultural researchers in Congo fell during 2000–2014, driven mostly by reductions in the number of MSc- and PhD-qualified researchers. Research staffing levels stabilized between 2012 and 2014.



Congo's agricultural researchers by qualification level

DGRST lost many PhD- and MSc-qualified researchers during 2000–2014 due to retirement and staff attrition in response to low salary levels. Vacant positions could not be filled because of long-term civil service recruitment restrictions. Higher education agencies employ much higher shares of PhD-qualified researchers.



Congo's share of female researchers

In 2014, 19 percent of agricultural researchers in Congo were female, representing an improvement over the country's 2008 level. On average, female researchers were younger and less likely to hold PhD degrees than their male colleagues.

By qualification level, 2014

BSc **21%**	MSc **25%**	PhD **9%**

By age bracket, 2014

< 41 **34%**	41–50 **30%**	> 50 **9%**

Congo's MSc- and PhD-qualified agricultural researchers by discipline

Zoology and the plant sciences of breeding/genetics, pathology, physiology, and botany constituted the dominant disciplines among PhD-qualified researchers in 2014. Among MSc-qualified researchers, plant breeding, veterinary medicine, and zoology were the most well-represented disciplines.

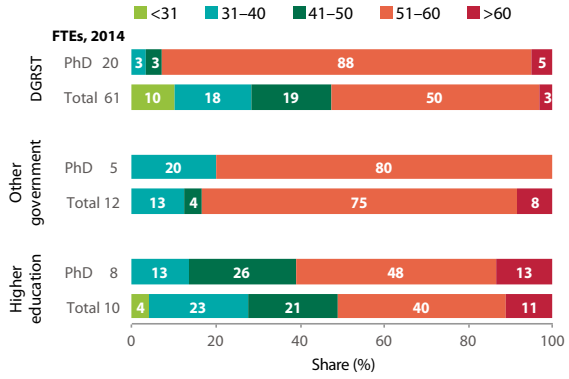
Agricultural researchers, 2014	FTEs		Share (%)	
	MSc	PhD	MSc	PhD
Plant breeding/genetics (incl. biotechnology)	10	5	18	13
Plant pathology	–	4	–	11
Plant physiology	5	4	10	10
Botany	2	4	3	11
Seed science and technology	4	1	8	1
Other crop sciences	–	–	–	1
Animal breeding/genetics	–	0.2	–	1
Animal husbandry	6	4	12	11
Animal nutrition	–	1	–	3
Dairy science	0.2	–	0.4	–
Poultry	–	0.4	–	1
Veterinary medicine	8	0.2	14	1
Zoology/entomology	7	5	13	14
Other animal and livestock	–	0.2	–	1

Agricultural researchers, 2014	FTEs		Share (%)	
	MSc	PhD	MSc	PhD
Forestry and agroforestry	3	3	5	7
Fisheries and aquatic resources	–	2	–	4
Soil sciences	1	–	1	–
Natural resources management	1	0.3	2	1
Water and irrigation management	–	0.2	–	1
Ecology	–	1	–	3
Biodiversity conservation	1	1	3	2
Food sciences and nutrition	2	1	3	3
Socioeconomics (incl. agricultural economics)	0.2	–	0.4	–
Extension and education	0.2	–	0.4	–
Other sciences	4	0.4	7	1
Total	**54**	**38**	**100**	**100**

Note: Data are estimates based on an agency sample representing 99 percent of the total number of FTE researchers.

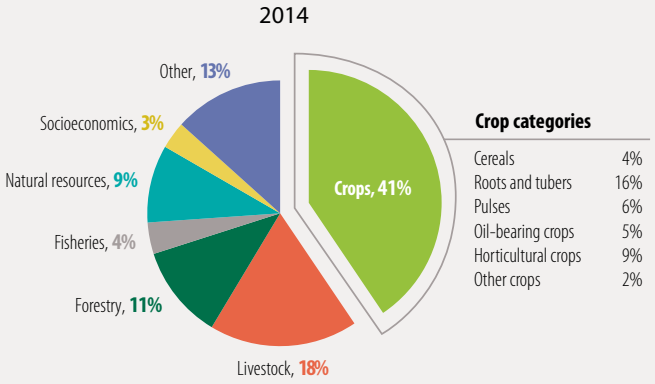
Congo's agricultural researchers by age bracket

As of 2014, more than half of all agricutural researchers and three-quarters of those with PhD degrees were more than 50 years old, and hence approaching retirement age. In particular, DGRST and other government agencies employ very large shares of PhD-qualified researchers over the age of 50.



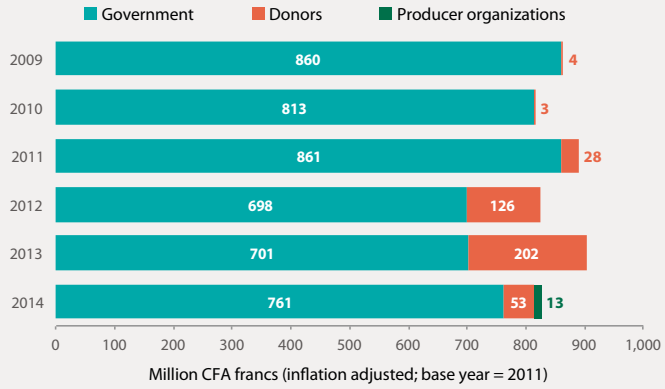
Congo's agricultural researchers by area of focus

In 2014, 41 percent of Congo's FTE researchers conducted crop research, followed by livestock research (18 percent), forestry research (11 percent), and natural resources research (9 percent). Major crops under investigation included cassava, beans and other pulses, bananas, vegetables, and maize.



Sources of DGRST's funding

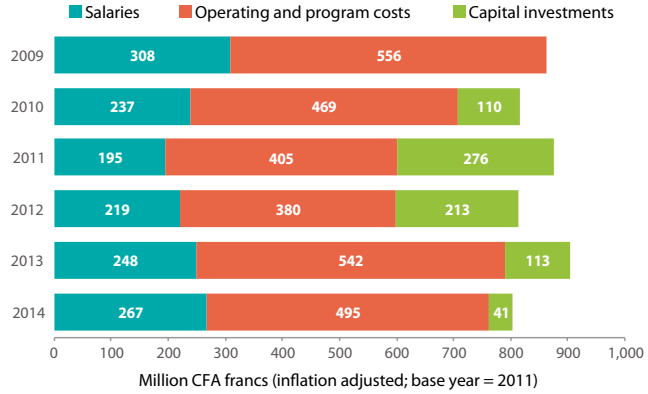
After 2011, government funding to DGRST centers declined in response to the economic effects of a decline in global oil prices. In contrast, donor funding rose during 2012–2013 based on the European Union's sugar support program. Notably, none of the centers generated their own funding through the sale of goods or services.



Note: Data exclude CERVE, CRESSH, and CRIPT.

DGRST's spending by cost category

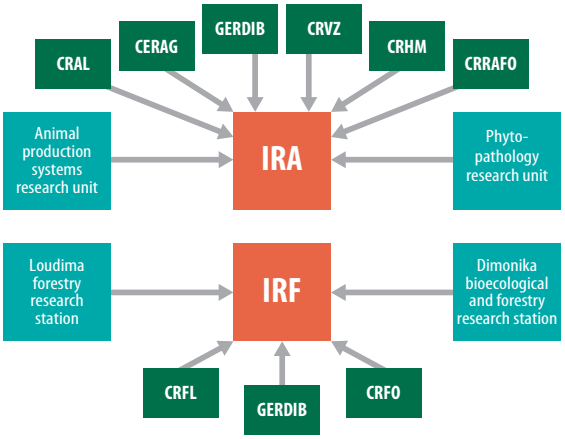
During 2009–2014, salaries accounted for 29 percent of all spending by the DGRST centers; operating and program costs represented 56 percent, and capital investments constituted 15 percent. Capital investments have been insufficient to meet the need for infrastructure and equipment, as well as the construction of new headquarters.



Note: Excludes CERVE, CRESSH, and CRIPT.

The establishment of IRA and IRF

In March 2014, a number of DGRST centers were consolidated into the new institutes, IRA and IRF, as depicted below. CRESSH and CRIPT became autonomous institutes; CERVE and CRCRT were merged to form IRSEN; and research previously undertaken by GERDIB was allocated to IRA, IRF, and IRSEN.



DGRST's recent peer-reviewed publications

The level of scientific outputs of DGRST's centers is low. During 2012– 2014, the centers published a combined yearly average of 6 international, 1 regional, and 5 national journal articles; 0.3 books; and 0.3 book chapters. This represents an overall average of 12 publications per year, or 0.1 publications per FTE researcher.

Type	Number of publications, 2012–2014 average	Per FTE researcher
Journal articles		
International	6.0	0.059
Regional	1.0	0.010
National	4.7	0.046
Books	0.3	0.003
Books chapters	0.3	0.003
Total	**12.3**	**0.121**

Note: Data exclude CRESSH, CRHM, and CRIPT.

Resources for the Republic of Congo

This factsheet presents recent data on the performance of agricultural research in the Republic of Congo, 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 the Republic of Congo 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 African countries.

ASTI's **data download tool** provides access to more in-depth ASTI datasets and graphs for the Republic of Congo and many other countries.

ASTI's **agency directory** provides a view of agencies that conduct agricultural research in the Republic of Congo, along with their locations and key agency-level indicators.

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 **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

AgGDP	agricultural gross domestic product
CERAG	Plant Genetic Improvement Research Center
CERVE	Center for Studies on Vegetable Resources
CNES	National Soil Study Center
CRAL	Agricultural Research Center of Loudima
CRCRT	Soil Conservation and Restoration Research Center
CRESSH	Center for Research and Studies on Social and Human Sciences
CRFL	Coastal Forestry Research Center
CRFO	Ouesso Forestry Research Center
CRHM	Mossaka Hydrobiological Research Center
CRIPT	Research and Technology Project Initiation Center
CRRAFO	Oyo Regional Agricultural and Forestry Research Center
CRVZ	Livestock and Veterinarian Research Center
DGRST	General Delegation of Scientific and Technical Research
FTE(s)	full-time equivalent(s)
GERDIB	Biodiversity Research and Study Group
IRA	National Agricultural Research Institute
IRF	Forestry Research Institute
IRSEN	Research Institute of Exact and Natural Sciences
PPP(s)	purchasing power parity (exchange rates)
R&D	research and development

ABOUT ASTI, IFPRI, AND IRA

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 **National Agricultural Research Institute (IRA)**, is the Republic of Congo's principal agricultural research agency. IRA, which falls under the Ministry of Scientific Research, conducts crop and livestock research.

ASTI/IFPRI and IRA gratefully acknowledge participating agricultural R&D agencies for their contributions to the data collection and preparation of this factsheet. ASTI also acknowledges the Bill & Melinda Gates Foundation and CGIAR Research Program on Policies, Institutions, and Markets for their generous support of ASTI's work in Africa south of the Sahara. 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 IRA.