

BURUNDI

RECENT DEVELOPMENTS IN PUBLIC AGRICULTURAL RESEARCH

Gert-Jan Stads and Léonidas Ndimurirwo

Country Note • April 2011

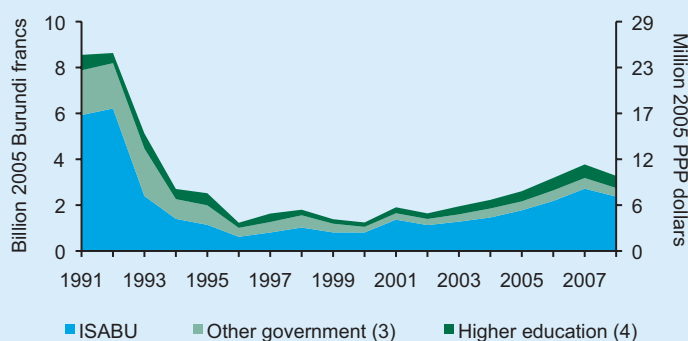
LONG-TERM INVESTMENT AND CAPACITY TRENDS IN PUBLIC AGRICULTURAL R&D

Burundi's agricultural sector employs close to 90 percent of the country's economically active population, represents approximately 50 percent of its gross domestic product (GDP), and accounts for over 80 percent of exports (World Bank 2010; FAO 2009). However, structural constraints including low productivity, land fragmentation, weak water resource management, and processing and preservation problems impede agricultural growth. In addition, the civil war that shook the country in the 1990s negatively impacted the sector, including agricultural research and development (R&D) investment. Though they remain far below pre-crisis levels, total agricultural R&D spending picked up again after the 2003 signing of the peace treaty that ended the national conflict. In 2008, Burundi's agricultural R&D investments totaled 3.3 billion Burundi francs, equivalent to 9.6 million PPP dollars, in 2005 prices (Figure 1; Table 1). Unless otherwise stated, all dollar values in this note are based on purchasing power parity (PPP) exchange rates.¹ PPPs reflect the purchasing power of currencies more effectively than do standard exchange rates because they compare the prices of a broader range of local—as opposed to internationally traded—goods and services. Burundi's agricultural research

Key Trends Since 2000

- Following a decade of sociopolitical turmoil, the 2003 peace agreement triggered the return of foreign aid to Burundi and, as a consequence, led to an upturn in agricultural research and development (R&D) spending.
- Agricultural research capacity has also been on the increase since 2003.
- Nevertheless, the Burundi Institute of Agronomic Sciences (ISABU)—the country's principal agricultural research agency—still lacks a critical mass of PhD-level researchers.
- Donors—in particular the Belgian government and the World Bank—play a crucial role in funding Burundi's agricultural R&D.

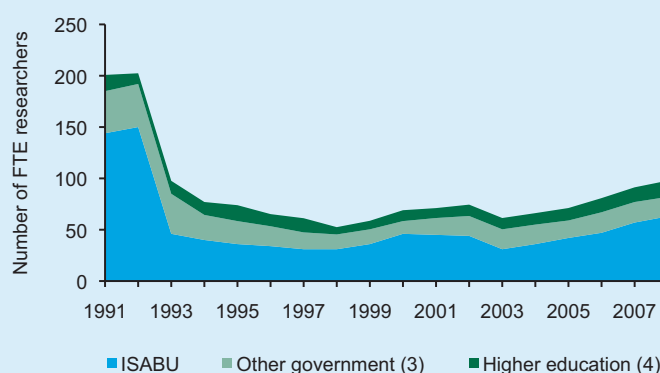
Figure 1—Public agricultural R&D spending adjusted for inflation, 1991–2008



Sources: Calculated by authors from ASTI–ISABU 2009–10 and Castelo Magalhães, Beintema, and Ndimurirwo 2003.

Notes: Figures in parentheses indicate the number agencies in each category. For more information on coverage and estimation procedures, see the Burundi country page on ASTI's website at asti.cgiar.org/burundi.

Figure 2—Public-sector agricultural research staff in full-time equivalents, 1991–2008



Sources: Calculated by authors from ASTI–ISABU 2009–10 and Castelo Magalhães, Beintema, and Ndimurirwo 2003.

Notes: Figures in parentheses indicate the number of agencies in each category. FTE totals include expatriate researchers temporarily assigned to ISABU in the early 1990s.

Table 1—Overview of public agricultural R&D spending and research staff levels, 2008

Type of agency	Total spending			Total staffing	
	Burundi francs	PPP dollars	Shares	Number	Shares
	(million 2005 prices)		(%)	(FTEs)	(%)
ISABU	2,372.3	6.9	72	63.0	64
Other government (3)	374.0	1.1	11	19.0	19
Higher education (4)	529.2	1.5	16	15.8	16
Total (8)	3,275.5	9.6	100	97.8	100

Source: ASTI-ISABU 2009–10.


Note: Figures in parentheses indicate the number of agencies in each category.

capacity levels are also indicative of a positive trend. In 2008, the country employed 98 agricultural researchers expressed in full time equivalents (FTEs), a marked increase from the 69 FTEs recorded in 2000 (Figure 2). This growth in agricultural research capacity is largely attributable to the Burundi Institute of Agronomic Sciences (ISABU), which, in recent years, has been recruiting high numbers of young researchers.

ISABU is Burundi's principal agricultural research agency, accounting for nearly two-thirds of the country's agricultural research capacity and close to three-quarters of its agricultural R&D investments. The institute was created in 1962 and is placed under the Ministry of Agriculture and Livestock (MINAGRIE). Its program is built around four main thematic areas: crops, livestock, farming systems, and rural socioeconomics. More specifically, its research focuses on the production of high-quality seeds; agroforestry and food trees; erosion control; cattle race improvement techniques; fodder crops; farm profitability; and on organizing production by region. ISABU also carries out soil analyses and plant-health diagnostics in its laboratories in close collaboration with MINAGRIE. The institute is headquartered in Bujumbura and has six agricultural experiment stations, ten research centers, and six research units. Before 1993, ISABU employed 150 FTE researchers, but following the start of sociopolitical conflict that year, the number of researchers plummeted. During the period 1993–2006 the institute's research capacity never exceeded 50 FTEs. In more recent years, however, staffing levels began showing an upward trend; by 2008, ISABU employed 63 FTE researchers. The November 2003 peace treaty triggered the donor community's return to Burundi; the institute's investment levels have since exhibited a steady upturn. Nonetheless, the institute's total spending in 2008 (2.4 billion Burundi francs or 6.9 million PPP dollars, in 2005 prices) was only at about one-third of the 1992 total, just before the outbreak of conflict.

Three other government agencies are involved in agricultural research: the National Center for Food Technologies (CNTA), the National Veterinary Laboratory (LNV), and the Institute of Agronomic and Animal Production Research (IRAZ). In 2008, they jointly accounted for 19 percent of the country's total agricultural R&D capacity and 11 percent of agricultural R&D spending. Like ISABU, CNTA reports to MINAGRIE. Its mandate is to stimulate food technology R&D and to encourage small businesses to adopt newly developed technologies. In 2008, CNTA employed 13 FTE researchers. LNV, which carries out applied research on animal

ASTI Website Interaction

 More details on institutional developments in agricultural research in Burundi are available in the 2003 country brief at http://www.asti.cgiar.org/pdf/Burundi_CB5.pdf.

 Underlying datasets can be downloaded using ASTI's data tool at www.asti.cgiar.org/data.

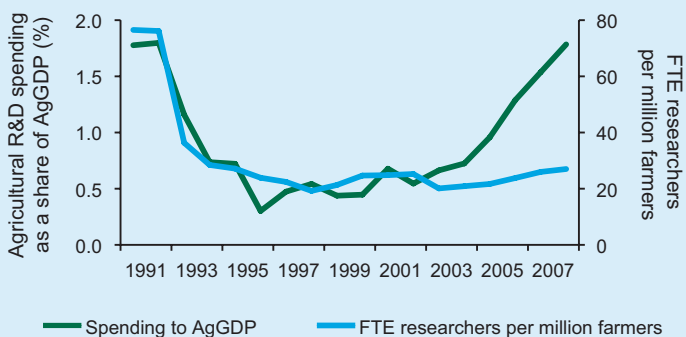
 A list of the 4 government and 4 higher education agencies included in this brief is available at asti.cgiar.org/burundi/agencies.

www.asti.cgiar.org/burundi

diseases, employed 4 FTE researchers in 2008. IRAZ was instituted by the Economic Community of the Great Lakes Countries (CEPGL), the members of which are three countries in the region: Rwanda, Burundi, and the Democratic Republic of Congo. IRAZ therefore has a regional mandate and its studies and research projects are executed jointly by Burundi and the two other countries. IRAZ' infrastructure at Gitega was destroyed shortly after the conflict broke out, after which Burundi found itself alone in supporting the institute with a small annual operational budget. Currently CEPGL is restarting its activities and the two other countries have resumed contributions to IRAZ. In an effort to give the institute a fresh boost, CEPGL provided it with a new management team, including a new director general, director of science, and administrative and financial director. This team has already been promised financial assistance—a grant of up to 600,000 euro a year—by the European Union. The resumption of the institute's banana and taro research has also been noted. In 2008, IRAZ employed 3 FTE researchers, but this total is expected to increase in the coming years.

In 2008, the four higher-education agencies involved in agricultural research accounted for 16 percent of Burundi's agricultural research capacity. Two of the four agencies—the Higher Institute of Agriculture (ISA, 3 FTEs) and the Faculty of Agronomic Science (FACAGRO, 6 FTEs)—are placed under the University of Burundi; they conduct research on food technology, food crops, and farming systems. FACAGRO currently operates only three research programs that focus on edible mushrooms, upland rice varieties and virus cleaning procedures, and the micropropagation of food crops and agroforestry species. Some FACAGRO faculty members collaborate with counterparts at Belgian universities on joint projects, many of which are in the rural socioeconomics field (Laroche 2009). The third higher-education agency, the University of Ngozi, which was established in 1999, also carries out some agricultural research through its Science and Technology Faculty and its Center for Rural and Agricultural Studies. Combined, these two units employed 6 FTEs in 2008. The higher-education agencies' infrastructure and research equipment are mostly old, outdated, and war-damaged. At the time of writing, the lack of adequate human and financial

Figure 3—Intensity of agricultural research spending and capacity, 1991–2008



Sources: Calculated by authors from ASTI–ISABU 2009–10; Castelo Magalhães, Beintema, and Ndimurirwo 2003; FAO 2009; and World Bank 2010.

resources was said to seriously impede the rehabilitation and adaptation of existing facilities, also making it difficult to ensure high-quality teaching and efficient research.




AGROBIOTECH and PHYTOLABU are two private-sector agencies involved in agricultural R&D. These two in vitro cultivation laboratories focus on the bulk production of in vitro seedlings for commercial purposes. For example, ISABU turns to PHYTOLABU to acquire its stocks of taro seedlings. Due to a lack of data for these two laboratories, analysis in this country note excludes the private sector.

In 2008, 15 percent of Burundi’s agricultural researchers were women. This share, which reflects a rather low female participation in agricultural R&D, shows no improvement on numbers recorded at the turn of the millennium (ASTI–ISABU 2009–10, and Castelo Magalhães, Beintema, and Ndimurirwo 2003). In 2008, the support-staff-to-researcher ratio averaged 6.6, consisting of 4.0 technical, 0.3 administrative, and 2.3 “other” support staff, which comprises laborers, guards, drivers, etc. (ASTI–ISABU 2009–10). Burundi’s total public spending as a percentage of agricultural output (AgGDP)—a comparative indicator of agricultural R&D spending across countries—was \$1.78 for every \$100 of AgGDP in 2008 (Figure 3), which is much higher than the \$0.45 recorded in 2000 and matches pre-war ratios. Burundi’s intensity ratio is almost three times the average ratio for Africa in 2008, but this indicator points to a decline in agricultural output rather than a large increase in R&D investments. Civil war, overpopulation, and soil erosion have all contributed to the halving of AgGDP during the period 1996–2008 and Burundi continues to import large quantities of food products. The trend exhibited by the number of FTE researchers per farmer has shown more stability since the turn of the millennium. In 2008, Burundi employed 27 FTE agricultural researchers for every million farmers.

INSTITUTIONAL STRUCTURE AND POLICY ENVIRONMENT

Overall, the institutional structure of Burundi’s agricultural research system has hardly changed since the turn of the millennium, but individual institutions did undergo fundamental changes as conditions evolved throughout the country’s conflict. The period spanning 1993 and 2004 was marked by the negative impact of this crisis, a consequence of which was the suspension

ASTI Website Interaction

-  Detailed definitions of PPPs, FTEs, and other methodologies employed by ASTI are available at asti.cgiar.org/methodology.
-  The data in this brief are predominantly derived from surveys. Some data are from secondary sources or were estimated. More information on data coverage is available at asti.cgiar.org/burundi/datacoverage.
-  More relevant resources on agricultural R&D in Burundi are available at asti.cgiar.org/burundi.

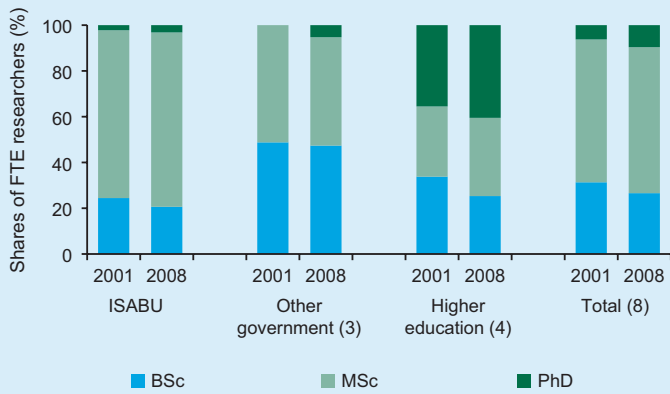
www.asti.cgiar.org/burundi

of foreign aid, which in turn led to a severely reduced level of research activity. The implementation of the five-year (1993–98) plan for agricultural research failed due to the high level of insecurity, reduced staff numbers, and the departure of foreign scientists. The national reconciliation process that Burundi entered at the beginning of the millennium paved the way to the 2003 peace treaty, which in turn heralded the return of more secure conditions. Only then was it possible for ISABU to once again benefit from foreign assistance and resume its scientific activities. At the time of writing, the drawing-up phase—which has been supported technically and financially by the Belgian development agency (CTB/BTC)—of a new five-year plan for agricultural research is near completion (MINAGRIE, NEPAD, and CAADP 2009). Finally, following the ratification in December 2010 of a law changing the status of ISABU’s personnel, the institute is now able to offer its researchers improved salary conditions (ISABU 2011).

RESEARCH STAFF QUALIFICATIONS AND TRAINING

In 2008, 74 percent of Burundi’s FTE agricultural researchers were trained to the postgraduate level, although most held MSc degrees (Figure 4). Just 10 percent of the researchers held PhD degrees. This share of PhD-level researchers is much higher in the higher-education sector (41 percent) than at ISABU (3 percent) or in the other government agencies (5 percent), a trend observed in many other African countries as well. As Burundi’s universities do not offer PhD training, MSc-qualified scientists who wish to continue their studies have to travel abroad. Burundi scientists traditionally turned to universities in Belgium, France, or the United States, but an increasing number have recently chosen to pursue their studies in the subregion, particularly in Kenya, Tanzania, and Uganda. Such training arrangements are frequently part of a broader association with one of the regional research networks such as the Association for Strengthening Agricultural Research in Eastern and Central Africa (ASARECA), the Consortium for Improving Agriculture-based Livelihoods in Central Africa (CIALCA), and the International

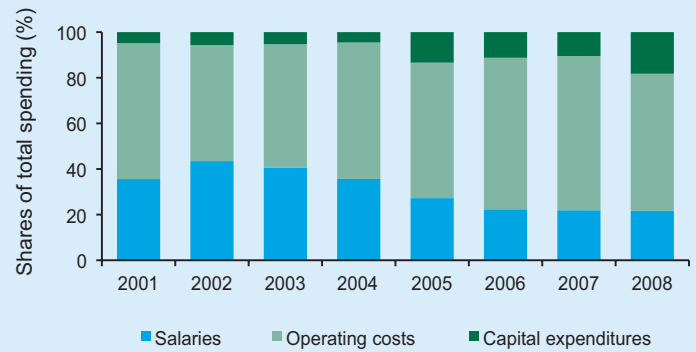
Figure 4—Degree level of researchers by institutional category, 2001 and 2008



Source: ASTI-ISABU 2009–10.

Note: Figures in parentheses indicate the number of agencies included in each category.

Figure 5—Cost category shares of ISABU, 2001–08



Source: ASTI-ISABU 2009–10.

Institute for Tropical Agriculture (IITA). Some students are unable to attend the subregion's universities due to insufficient knowledge of English. There is hope, however, that Burundi's impending East African Community membership will lead to improved English-speaking abilities of the country's scientists.

In 2008, only two of ISABU's researchers held PhD degrees, which represents an extremely low level and forms a true constraint. A minimal number of highly qualified researchers is crucial if ISABU is to conduct high-quality research, establish relations with policymakers and donors, and ensure proper management of its research in general. The lack of such a critical mass is also an obstacle to securing funds from external sources that operate through subregional programs or competitive funds. Burundi scientists, however, do not view ISABU as an attractive employer because of its status as a public administrative institution. Its salary scale, which researchers consider to be "unrewarding", dis-incentivizes scientists to plan long careers at the institute. In contrast, the country's universities, which hold the status of "scientific institutions", nongovernmental organizations (NGOs), and international organizations operating in the country offer higher salaries and better working conditions. ISABU has no official post-university training policy. It is often left to the researchers themselves to obtain a scholarships for further degree studies. When they return to Burundi, these newly-graduated ISABU researchers often seek employment with other agencies, even though an administrative clause prohibits them from doing so. It is thus very difficult for ISABU to attract highly-qualified researchers and to maintain adequate and stable staffing levels. In December 2010, the Ministers of Agriculture and of Finance signed a joint decree ratifying a new status for ISABU's research personnel, which is a step toward improving researcher salary conditions and slowing down the exodus of well-qualified scientists. At this stage, it is still too early to comment on the effects of this change.

Unlike many other country's agricultural research institutes, ISABU does not face the problem of a rapidly aging researcher teams. As of 2011, the average age of ISABU's researchers stands at 43 years; 11 of the 64 researchers are 50 years or older.

These past few years, the National University of Rwanda has been successful in attracting numerous scientists from neighboring

Burundi because of higher salaries and better training opportunities. But here, too, the Burundi government has taken steps to counter this tendency through a 2009 law that improves salary conditions for university staff. The positive impact of this measure on staff continuity is already noticeable: most of those who had left Burundi to seek employment in Rwanda have returned.

INVESTMENT TRENDS

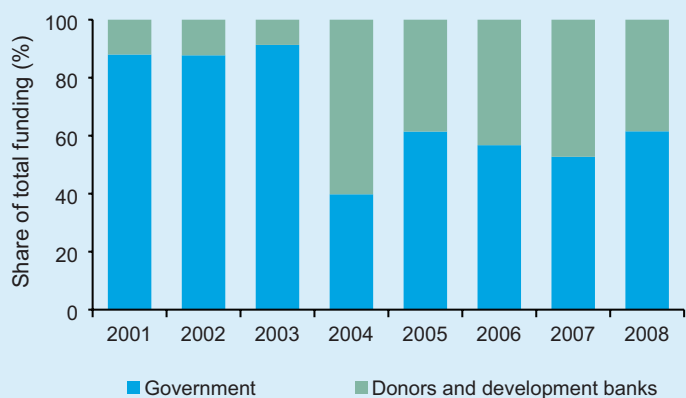
Expenditures

The allocation of research budgets across salaries, operating costs, and capital investments affects the efficiency of agricultural R&D, so detailed data on each of the cost categories were collected from ISABU as part of this study. During 2001–08, the institute's allocated 29 percent to staff salaries, 61 percent to operating and program costs, and 10 percent to capital investments (Figure 5). In comparison with many national agricultural research institutes in other African countries, ISABU allocated a relatively low share to salaries and a relatively high share to operating and program costs, a situation that reflects the institute's low salary levels and relatively strong dependence on donor support to help fund program implementation and investments. Capital investment levels have gradually increased over the past few years. Belgium provided ample funding for the construction and restoration of several research stations through the Heavily Indebted Poor Countries (HIPC) Initiative. The World Bank-funded Agricultural Rehabilitation and Support Project (PRASAB) also funded rehabilitation of research infrastructure.

Funding Sources

Agricultural R&D in Burundi derives its funding from the national government, donors, and development banks. During 2001–08, government grants accounted for 62 percent of ISABU's total income, while the share contributed by donors and development banks accounted for 38 percent (Figure 6). The 2003 peace treaty triggered the immediate return of several important donors, notably Belgium and the World Bank; between 2001 and 2003, donor contributions played only a marginal role. Government

Figure 6—Funding sources of ISABU, 2001–08



Source: ASTI-ISABU 2009–10.

grants pay for the regular budget, which covers salaries and operating costs, and the HIPC Initiative budget, which is used to fund some of the research and capital investments.

Burundi's former colonizer, Belgium, plays an important role in funding the country's agricultural research. Belgium's activities, which are stipulated in bilateral aid agreements, concentrate on three priority sectors: health, education, and agriculture. During the period 2003–06, CTB/BTC funded a project to boost and support the seed production sector (known as RAFS); RAFS' budget totaled three million euro, 104,500 euro of which was provided by the Burundi government as counterpart funds. ISABU was granted 196,000 euro to purchase reagents and laboratory equipment; train two seed quality control researchers at Belgium's Gembloux University; finance the production of foundation seed and taro seed; and purchase a 50-kVA generator and build a shelter around it (CTB/BTC 2010a). The RAFS project revealed the need for broader structural assistance to revive ISABU's research program. The CTB/BTC consequently developed an overall institutional development program, which was launched in 2010.

This institutional development program aims to steer ISABU's agricultural research action towards producing results and drawing up recommendations that respond to the users' medium and long-term priority needs. Specific program objectives focus on developing a master plan for ISABU's research (referred to as PDRI); improving the institute's human resource management and ability to run its various institute components; and strengthening research programs in priority areas. Parallel program activities entail rehabilitating buildings, setting up water and electricity supply networks in ISABU's research centers and stations, and providing ISABU management with an internet connection and linking three of its research stations at Gisozi, Mahwa, and Moso. Finally, the project intends to refurbish the facilities so as to improve working conditions and motivate the research teams. Five vehicles have, for example, already been made available to ISABU; four of these are intended for the up-country research stations. Funds under discussion at the time of writing will renovate facilities and replenish the stocks of the main laboratories (CTB/BTC 2010b).

The World Bank's involvement in funding Burundi's agricultural R&D and financing ISABU originally occurred through PRASAB, which totaled \$22 million (current prices) and was implemented between 2004 and 2010. This project included a

small infrastructure rehabilitation component that benefited ISABU. Following PRASAB's completion, World Bank support to Burundi's agricultural sector continued through a new project, the Agro-Pastoral Productivity and Markets Development Project (PRODEMA). This project aimed to increase agricultural production and develop agricultural markets to stimulate income-generating activities for rural populations. The need to protect the country's natural resources is also a major concern. One of PRODEMA's components focuses specifically on demand-driven agricultural research.

ISABU also received funding from a variety of international organizations and regional networks such as ASARECA, CIALCA, IITA, the International Rice Research Institute (IRRI), the International Center for Tropical Agriculture (CIAT), the International Livestock Research Institute (ILRI), the International Potato Center (CIP), and France's Agricultural Research for Development Center (CIRAD). These organizations focus on supporting short and long-term training arrangements; facilitating exchange programs between researchers or technicians; providing complementary funds to run joint projects at the regional level; and fostering the exchange of genetic material as well as of scientific information and documentation.

Furthermore, a few local agro-industrial companies such as the Coffee Board of Burundi (OCIBU), the Regional Society for the Development of Imbo (SRDI), and the Burundi Tea Office (OTB) provide funds in support of ISABU's research on coffee, rice, and tea, respectively. Some higher education research is done through one-off consultancy projects financed by NGOs or international development projects. Other research projects are carried out as part of PhD-thesis work, or financed by partnering universities abroad, international research institutes, or the Ministry of Higher Education and Scientific Research.

RESEARCH ALLOCATION

Given that allocating resources across various lines of research is a significant policy decision, detailed information was collected on the number of researchers (in FTEs) working in specific commodity areas. In 2008, 45 percent of Burundi's agricultural researchers carried out crop research. Fifteen percent were involved in post-harvest research, 12 percent worked on livestock topics, and 5 percent on forestry-related issues. The category labeled "other" includes research on natural resources, fisheries, food security, and socioeconomic issues.

Burundi's most intensively researched crop is coffee, accounting for 11 percent of total crop and livestock research. Other important crops included vegetables (10 percent), rice (7 percent), fruit (6 percent), and potatoes (6 percent). The principal livestock commodities were beef cattle (12 percent), poultry (4 percent), and dairy products (4 percent).

CONCLUSION

The political turmoil that hit Burundi in 1993 wreaked havoc on the country's agricultural R&D. Much of Burundi's research infrastructure was damaged or destroyed, donors withdrew, and overall investment and capacity levels plummeted. It was not until the signing of the 2003 peace treaty that the country's main donors (Belgium and the World Bank) returned to the scene, leading to a revival of agricultural R&D investment—albeit at a timid pace. In 2008, Burundi's investments in agricultural R&D

totaled 3.3 billion CFA francs (or 9.6 million dollars PPP, both in 2005 prices), which is still far below the levels recorded before the 1993 crisis. Agricultural research capacity levels have also shown an upward trend since 2003: in 2008, Burundi employed 98 FTE agricultural researchers.

Despite this slow recovery, a number of major challenges still need to be overcome. ISABU, Burundi's main agricultural R&D agency, lacks a critical mass of PhD-qualified researchers. This is a serious impediment to running high-quality research programs and attracting external funding. Additionally, scientists do not consider ISABU to be an attractive employer mainly because its salaries are low compared to those offered by universities, NGOs, and international organizations. In December 2010, the national government responded to this challenge by modifying the status of ISABU's researchers. The institute can now offer much higher salaries and there is hope that it will succeed in attracting and maintaining suitably qualified researchers.

Burundi's agricultural sector has been severely weakened by the decade-long sociopolitical crisis and the harmful impact of climatic disturbances, which have become more frequent since 2000. Agricultural R&D can play a crucial role in helping to increase production and providing opportunities for rural populations to boost their incomes. This in turn will lead to greater food security and the alleviation of poverty. The onus is therefore on the Burundi government to define a precise set of national R&D priorities and develop a matching set of agricultural R&D programs to address these priorities in a relevant and coherent way. The realization of real progress necessarily implies long-term support from the national government, donors, and the private sector.

NOTE

¹ Financial data are also available in current local currencies or constant 2005 U.S. dollars via ASTI's Data Tool, available at www.asti.cgjar.org/data.

IFPRI-ROME

Agricultural Science and Technology Indicators (ASTI) initiative
c/o ESA, Food and Agriculture Organization (FAO)
Viale delle Terme di Caracalla • 00153 Rome, Italy
Telephone: +39-06-570-53192 / 56334 • Skype: ifpriromeoffice
Fax: +39-06-570-55522 • Email: asti@cgjar.org
www.asti.cgjar.org

REFERENCES

- ASTI-ISABU (Agricultural Science and Technology Indicators and Burundi Institute of Agronomic Sciences). 2009–10. *Agricultural Science and Technology Indicators Survey*. Unpublished surveys. Washington, D.C. and Bujumbura.
- Castelo Magalhães, E., N. M. Beintema and L. Ndimurirwo. 2003. *Burundi*. ASTI Country Brief No. 5. Washington, D.C. and Bujumbura: IFPRI and ISABU.
- CTB/BTC (Belgian Development Agency). 2010a. *Développement agricole au Burundi*. <<http://www.btcctb.org/files/web/Fiche%20Info%20D%C3%A9veloppement%20Agricole%20au%20Burundi.pdf>>. Accessed March 9, 2011.
- _____. 2010b. *Redynamiser la recherche agronomique au Burundi*. <http://www.btcctb.org/files/web/Redynamiser%20la%20Recherche%20Agronomique_0.pdf>. Accessed March 9, 2011.
- FAO (Food and Agriculture Organization of the United Nations). 2009. FAOSTAT. <<http://faostat.fao.org/site/452/default.aspx>>. Accessed November 20, 2009.
- ISABU (Burundi Institute of Agronomic Sciences). 2011. *La vision stratégique de l'ISABU: Consolider et renouveler les approches de recherche en intégrant de nouveaux défis*. Bujumbura.
- Laroche, G. 2009. *Rapport de stage: Burundi – été 2008*. <<http://www.aceci.org/documents/Rapport-GL.pdf>>. Accessed February 11, 2011.
- MINAGRIE, NEPAD, and CAADP/PDDAA (Ministry of Agriculture and Livestock, New Partnership for Africa's Development, and Comprehensive African Agricultural Development Program). 2009. *Inventaire des efforts de développement en cours et leur alignement sur les principes et objectifs du PDDAA*. Bujumbura.
- World Bank. 2010. *World Development Indicators (WDI) & Global Development Finance (GDF)*. <http://databank.worldbank.org/ddp/home.do?Step=2&id=4&hActiveDimensionId=WDI_Series>. Accessed November 10, 2010.



Facilitated by:

INTERNATIONAL FOOD POLICY RESEARCH INSTITUTE
2033 K Street, NW • Washington, DC 20006-1002 USA
Tel: +1-202-862-5600 • Skype: ifprihomeoffice
Fax: +1-202-467-4439 • Email: ifpri@cgjar.org
www.ifpri.org

IFPRI is one of 15 agricultural research centers that receive their principal funding from governments, private foundations, and international and regional organizations, most of which are members of the Consultative Group on International Agricultural Research (www.cgjar.org).

ISABU is Burundi's principal agricultural research agency. The institute was created in 1962 and is placed under the Ministry of Agriculture and Livestock. Its program is built around four main thematic areas: crops, livestock, farming systems, and rural socioeconomics.

The Agricultural Science and Technology Indicators (ASTI) initiative compiles, analyzes, and publishes data on institutional developments, investments, and human resources in agricultural R&D in low- and middle-income countries. The ASTI initiative is managed by the International Food Policy Research Institute (IFPRI) and involves collaborative alliances with many national and regional R&D agencies, as well as international institutions. The initiative, which is funded by the Bill & Melinda Gates Foundation with additional support from IFPRI, is widely recognized as the most authoritative source of information on the support for and structure of agricultural R&D worldwide. To learn more about the ASTI initiative visit www.asti.cgjar.org.

The authors thank the 7 agricultural research agencies that participated in the ASTI-ISABU survey; without their commitment this country note would not have been possible. The authors also thank Michael Rahija for his research assistance and Nienke Beintema who provided comments on an early draft of this note. ASTI gratefully acknowledges the generous support from the Bill & Melinda Gates Foundation.

Copyright © 2011 International Food Policy Research Institute and Institut des Sciences Agronomiques du Burundi. Sections of this report may be reproduced without the express permission of, but with acknowledgement to, IFPRI and ISABU. For permission to republish, contact ifpri-copyright@cgjar.org.

This country note has been prepared as an output for the ASTI initiative and has not been peer reviewed. Any opinions stated herein are those of the authors and do not necessarily reflect the policies or opinions of IFPRI and ISABU.