

## BOTSWANA FACT SHEET

December 2008

# WOMEN'S PARTICIPATION IN AGRICULTURAL RESEARCH AND HIGHER EDUCATION

### Key Gender Trends

- In 2008, the three largest agricultural research and higher education agencies in Botswana employed 235 professional staff, of which 75 were female (32 percent).
- The share of female professional staff at the Department of Agricultural Research, the largest government research agency, declined from 36 percent in 2001 to 27 percent in 2008.
- Close to a quarter of all PhD-qualified staff were female, while 31 and 39 percent held MSc and BSc degrees, respectively.
- Women are well presented in all age groups. The share of female professional staff declines according to years of service, with the exception of staff employed at their respective agencies for more than 20 years.
- The share of women in management, including positions as deans of faculties and head of departments, was 16 percent.
- In 2007, female students accounted for 27 percent of the total student population in agricultural sciences, and 34 percent of the graduating students that year were female.

### Shares of Female Professional Agricultural Staff by Agency and by Degree

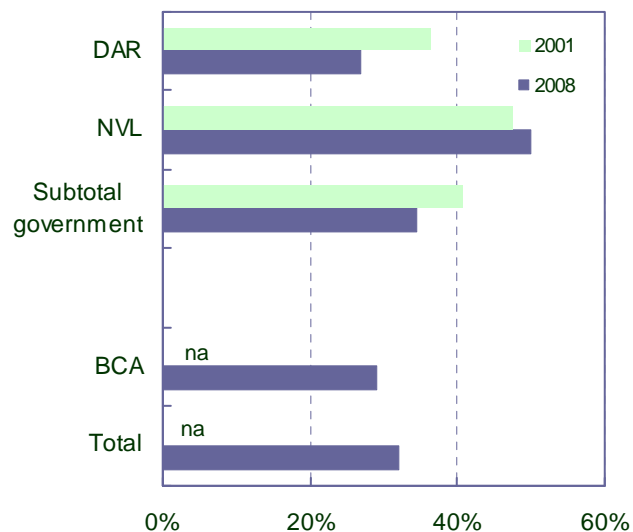
In 2008, the Department of Agricultural Research (DAR), the National Veterinary Laboratory (NVL), and the Botswana College of Agriculture (BCA) together employed 235 professional staff, of which 75—or 32 percent—were female. In 2001, the three sample agencies employed 80 percent of Botswana's total agricultural research staff in terms of full-time equivalents. The share of female staff employed at DAR, the largest government research agency, declined from 36 percent in 2001 to 27 percent in 2008 (Figure 1). This was the result of a considerably higher increase in the absolute number of male professional staff. The share of female agricultural staff at NVL increased slightly, from 48 percent in 2001 to 50 percent in 2008. No 2001 data were available for BCA.

Of the professional staff employed at the three agencies, 23 percent of those with PhD degrees, 31 percent of those with MSc degrees, and 39 percent of those with BSc degrees were female (Figure 2).

### Qualifications of Professional Agricultural Staff by Gender

In 2008, on average, fewer women than men held PhD or MSc degrees—20 compared with 31 percent, and 29 compared with 31 percent, respectively (Figure 3a). In contrast, more than half the female professional staff held BSc degrees compared with 38 percent of male staff.

**FIGURE 1. Female share of professional agricultural staff by agency, 2000 and 2008**

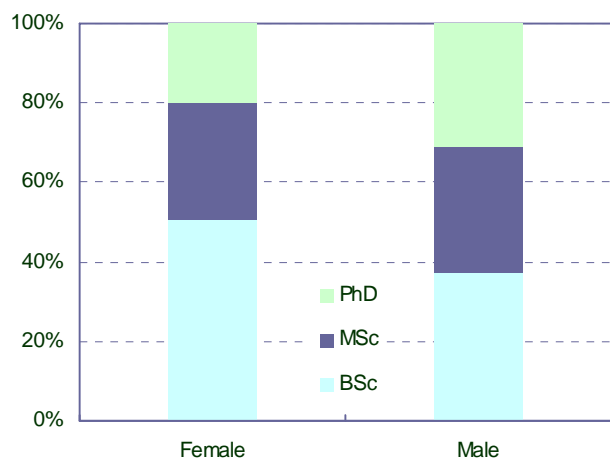


Notes: See page 3 for a list of agency names and categories. Data for NVL and BCA in this fact sheet are for late-2007. Na indicates that data were not available.

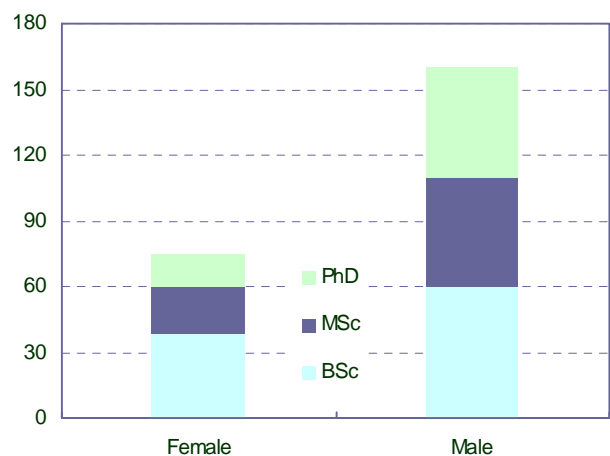
**FIGURE 2. Female share of professional agricultural staff by degree, 2008**



**FIGURE 3a. Qualifications of professional agricultural staff by gender, 2008 (shares)**



**FIGURE 3b. Qualifications of professional agricultural staff by gender, 2008 (headcount)**

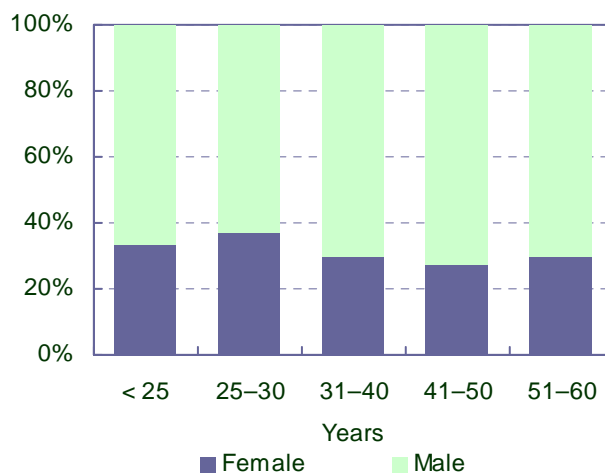


## Age and Seniority of Professional Agricultural Staff by Gender

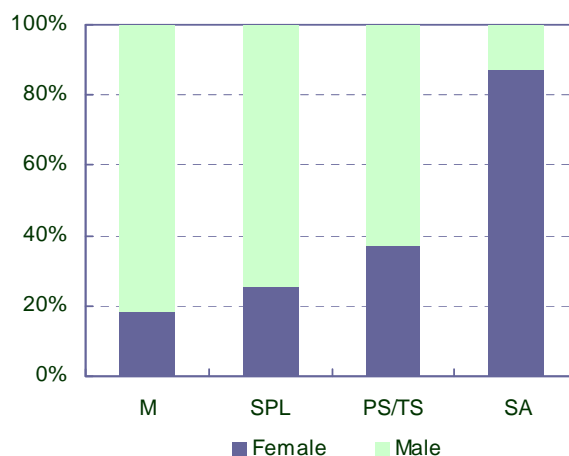
Women are well presented in all age groups, although their share is somewhat lower among the older age groups; 28 percent of professional staff aged 41 years or older were female, compared with 37 percent of professional staff aged 30 years or younger (Figure 4).

The six deans of faculties and heads of departments at BCA are all male, and 4 of the 16 management positions at DAR and NVL are held by women. Notably, a comparatively high share of women hold senior administrative positions (Figure 5).

**FIGURE 4. Age of professional agricultural staff by gender, 2008**

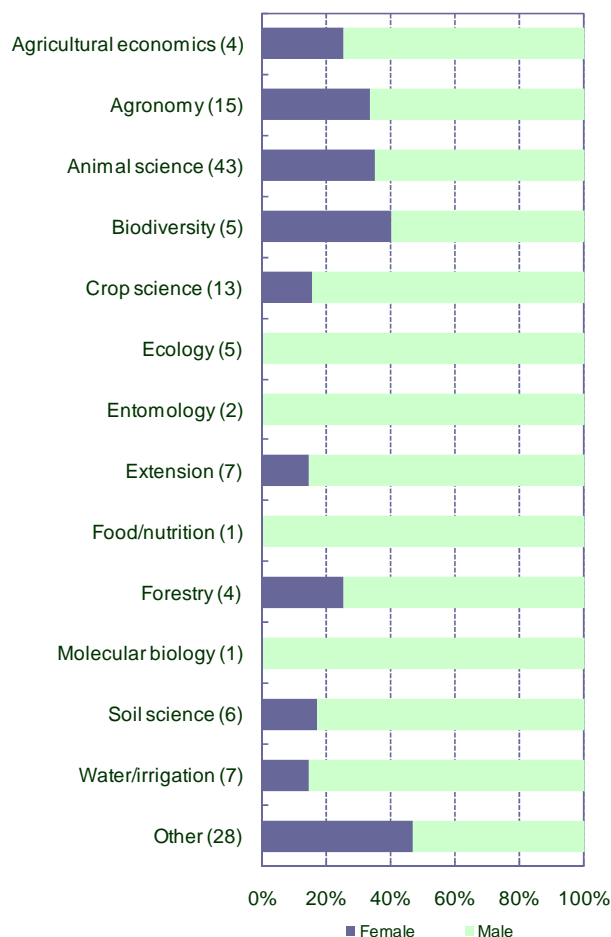


**FIGURE 5. Seniority of professional agricultural research and higher education staff by gender, 2008**



Note: M indicates management and includes directors, deans, and department heads; SPL includes scientists, (assistant) professors, and (senior) lecturers not in management positions; PS/TS indicates professional and technical support staff; and SA indicates senior administrative staff.

**FIGURE 6. Discipline-mix of professional agricultural research staff by gender, 2008**



Notes: The number of staff within each category is shown in parentheses. None of the staff at the three sample agencies was trained in fisheries or natural resource management in 2008.

**TABLE 1. Departures and promotions of professional agricultural staff by gender, 2005–07, and as a share of female and male professional staff employed in 2008**

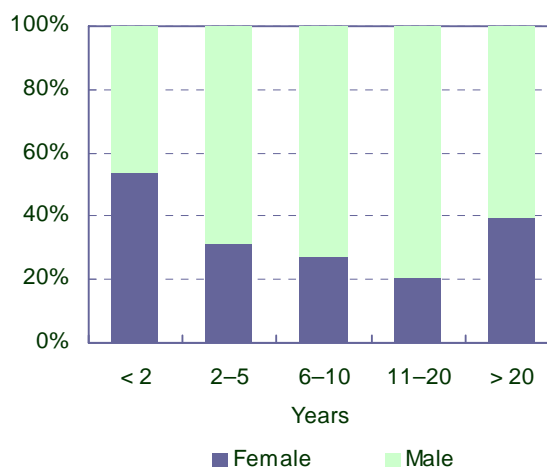
Status	Number of staff, 2005–07		Share of 2008 staff	
	Female	Male	Female	Male
Departures	17	30	23%	19%
Promotions	37	58	49%	36%

## Discipline Mix and Years of Service of Professional Agricultural Staff by Gender

About one-third or more of the professional staff trained in agronomy, animal science, and biodiversity were female. In contrast, few women were trained in crop sciences, extension, soil sciences, and water and irrigation management (14 to 17 percent each), and the single professional staff members working in food and nutrition science and in molecular biology were both male (Figure 6)

A decreasing trend was observed in the relationship between the proportion of female professional staff employed and their years of service at either the government or higher education agencies; the exception was staff members with more than 20 years of service. Of the 43 professional staff in that category, 40 percent were female (Figure 7).

**FIGURE 7. Years of service of professional agricultural staff by gender, 2008**



## Departures and Promotions of Professional Staff by Gender

For the sample agencies as a whole, 17 women and 30 men departed during the 2005–07 period, and 37 women and 58 men were promoted (Table 1). For the purpose of comparison, numbers of departing staff represent 23 and 19 percent of the female and male staff employed in 2008, respectively, and numbers of promoted staff represent 49 and 36 percent of female and male staff employed in 2008, respectively. The resulting trends indicate that a slightly higher share of women departed agencies, and—interestingly—a larger share of women were promoted within agencies.

The data in this fact sheet are derived from the following government and higher education agencies:

### Two government agencies

DAR Department of Agricultural Research  
 NVL National Veterinary Laboratory, Department of Animal Production and Health

### One higher education agency

BCA Botswana College of Agriculture

For further information on the organization of agricultural research in Botswana, see [http://www.asti.cgiar.org/pdf/Botswana\\_CB\\_19.pdf](http://www.asti.cgiar.org/pdf/Botswana_CB_19.pdf).

**TABLE 2. Professional agricultural staff completing training by gender, 2005–07, and as a share of female and male professional staff employed in 2008**

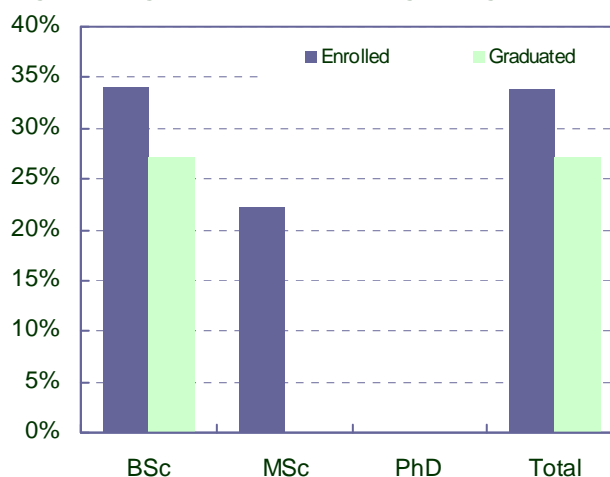
Level of Training	Number of staff, 2005–07		Share of 2008 staff	
	Female	Male	Female	Male
BSc	11	15	29%	25%
MSc	4	11	18%	22%
PhD	6	7	40%	14%

## Training, Enrollments, and Graduations by Gender

Of the female professional staff in our sample employed in agricultural research at the government and higher education agencies in 2008, 40 percent had obtained PhD degrees between 2005 and 2007, and close to one-fifth obtained MSc degrees during this timeframe (Table 2). Whereas the absolute number of staff obtaining PhD degrees was roughly equal, the share of women was considerably higher than the comparable share of men (40 versus 14 percent).

The share of female students enrolled at BCA was 34 percent, while 27 percent of graduating students in 2007 were female (Figure 8). The college does not currently offer PhD programs in agricultural sciences, and although 2 women and 9 men were enrolled in the FA-UEM’s MSc program, no students graduated in 2007.

**FIGURE 8. Share of female students enrolled in and graduating from Botswana College of Agriculture, 2007**



### About ASTI

The Agricultural Science and Technology Indicators (ASTI) initiative compiles, processes, analyzes, and reports data on institutional developments, investments, and human resources in agricultural R&D in developing 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 and 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 know more about the ASTI initiative visit [www.asti.cgiar.org](http://www.asti.cgiar.org).

### About AWARD

The African Women in African Agricultural Research and Development (AWARD) program, supported by the Bill & Melinda Gates Foundation and the United States Agency for International Development (USAID), is implemented by the Gender & Diversity (G&D) program of the Consultative Group on International Agricultural Research (CGIAR). Competitive two-year fellowships focused on building capacity in science, mentoring, and leadership are offered to high-performing female African scientists at one of three critical career junctures: completion of a BSc, MSc, or PhD degree. To know more visit [www.genderdiversity.cgiar.org](http://www.genderdiversity.cgiar.org).

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IFPRI was established in 1975. IFPRI is one of 15 agricultural research centers that receives its 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.cgiar.org](http://www.cgiar.org)).

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