

SOUTH AFRICA FACT SHEET

December 2008

WOMEN'S PARTICIPATION IN AGRICULTURAL RESEARCH AND HIGHER EDUCATION

Key Gender Trends

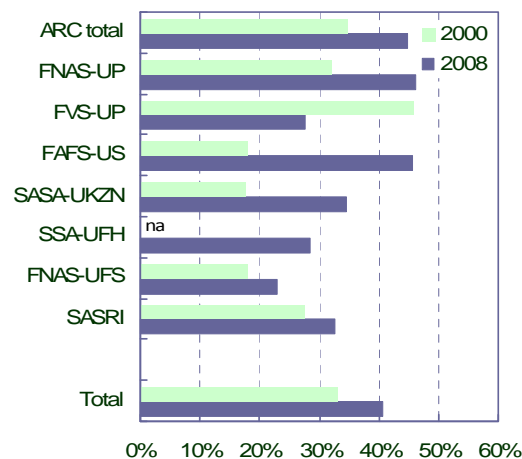
- In 2008, the 8 largest agricultural research and higher education agencies together employed 1,317 professional staff, of which 537 were female. The female share increased considerably between 2000 and 2008, from 33 to 41 percent, which is the highest in Sub-Saharan Africa.
- On average, 29 percent of all PhD-qualified staff were female, compared with 47 percent of staff holding MSc degrees and 49 percent of staff holding BSc degrees.
- Whereas about half the professional staff aged 50 years or younger were female, only a quarter of the professional staff aged 51 years or older were female. No clear gender trends were identified in terms of years of service at the respective agencies.
- The share of women in management, including positions as deans of faculties and head of departments, was 15 percent.
- In 2007, female students accounted for more than 62 percent of the total student population in agricultural sciences at three higher-education agencies, and 61 percent of the students that graduated that year were female.

Shares of Female Professional Agricultural Staff by Agency and by Degree

In 2008, the Agricultural Research Council (ARC), the South African Sugarcane Research Institute (SASRI), and the six largest faculties of agricultural sciences together employed 1,317 professional staff of which 537, or 41 percent, were female. In 2001, these agencies employed 78 percent of South Africa's total agricultural research staff in terms of full-time equivalents. The 41 percent share is the highest in Sub-Saharan Africa and also represents a considerable increase over the 2000 share of 33 percent (Figure 1a). Nevertheless, this upward trend was not consistent across all sample agencies. The female share of professional staff increased at ARC and the four remaining sample faculties—the University of Pretoria's Faculty of Natural and Agricultural Sciences (FNAS-UP), the University of KwaZulu Natal's School of Agricultural Sciences and Agribusiness (SASA-UKZN), the Free State's Faculty of Natural and Agricultural Sciences (FNAS-UFS), and the University of Stellenbosch's Faculty of Agriculture and Forestry Sciences (FAFS-US). In contrast, the share of female staff at the Faculty of Veterinary Science of the University of Pretoria (FVS-UP) declined.

Trends also differ across the 14 institutes and units under ARC; four institutes reported declining shares of female professional employees during 2000–08. Notably, at least half of the professional staff at ARC's Central Office and three institutes—the Vegetable and Ornamental Plant Institute (VOPI), the Animal Nutrition and Products Institute

FIGURE 1a. 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 some agencies in this fact sheet are for late 2007. Na indicates that data were not available.

(ANPI), and Onderstepoort Veterinary Institute (OVI)—were female (Figure 1b).

Of the professional staff at the agricultural research and higher education agencies, 29 percent of those with PhD degrees, 47 percent of those with MSc degrees, and 49 percent of those with BSc degrees were female (Figure 2). Notably, the share of professional female staff with MSc training increased from 39 to 47 percent, and those with PhD training increased from 20 to 29 percent during 2000–08.

FIGURE 1b. Female share of professional agricultural staff by ARC institute, 2000 and 2008

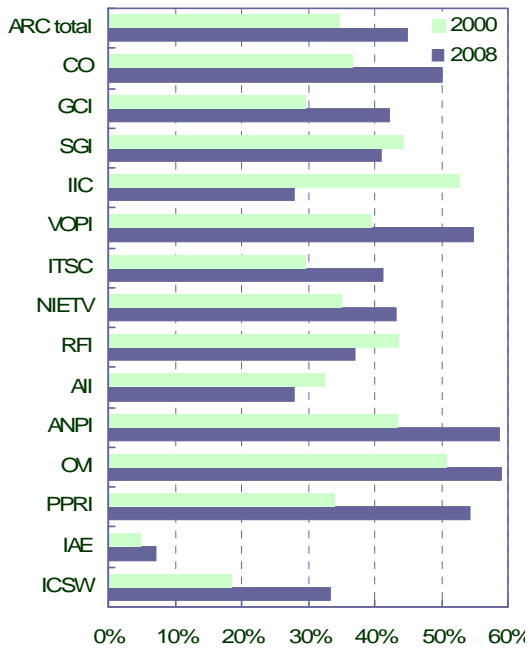
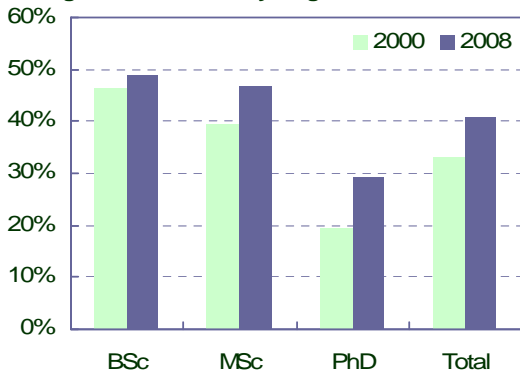


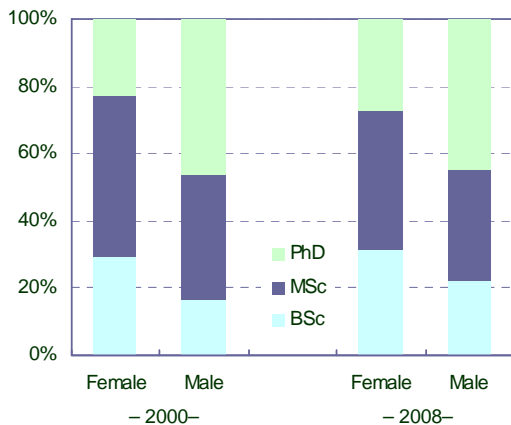
FIGURE 2. Female share of professional agricultural staff by degree, 2000 and 2008



Qualifications of Professional Staff by Gender

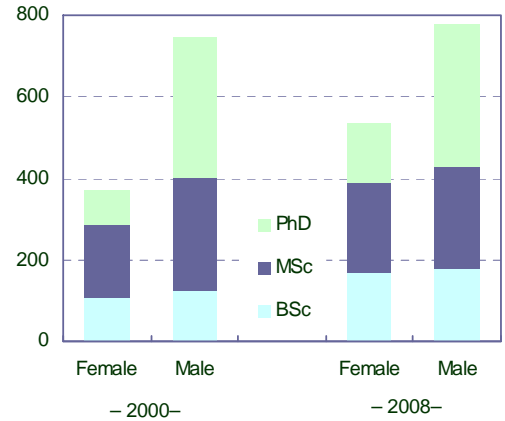
In 2008, overall, fewer women than men held PhD degrees at the sample agencies: 27 percent compared with 45 percent (Figure 3a). This gap has narrowed slightly since 2000 when the corresponding shares were 23 and 46 percent, respectively.

FIGURE 3a. Qualifications of professional agricultural staff by gender, 2000 and 2008 (shares)



During 2000–08, the total number of female professional staff increased significantly, from 371 in 2000 to 537 in 2008; an increase of 45 percent. The number of men increased by 4 percent (or 30 individuals). The number of women with PhD training increased from 84 to 146 during this period (Figure 3b).

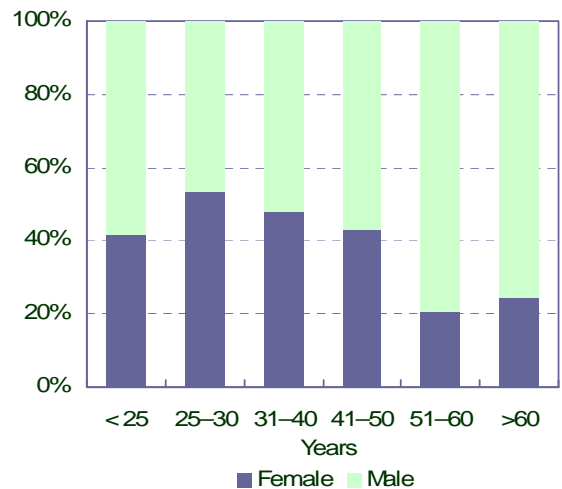
FIGURE 3b. Qualifications of professional agricultural staff by gender, 2001 and 2008 (headcount)



Age and Seniority of Professional Agricultural Staff by Gender

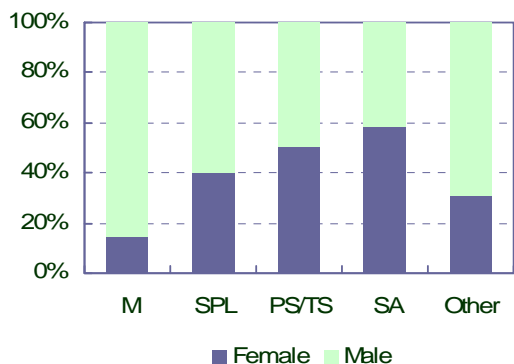
Half of all professional staff aged between 25 and 40 years were female. In contrast, of those aged 51 years or older, slightly more than 20 percent were female (Figure 4). Although the share of women under 25 is comparatively low; the total number of professional staff in this age group is very small (24 of a total of 1,316).

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



Only 6 of the 39 deans of faculties and heads of departments at the five higher education agencies were female, while 3 of the 33 management positions at ARC were held by women. In contrast, two of the three management positions at SASRI were held by women. Unsurprisingly, the female share of senior administrative staff was comparatively higher (Figure 5).

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

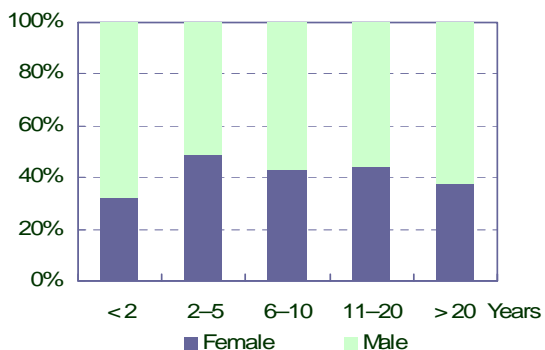


Note: M indicates management and includes directors, deans, and department heads; SPL includes scientists, (assistant) professors, and (senior) lecturers not in management positions; PS/TS indicates professional and technical support staff; and SA indicates senior administrative staff.

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

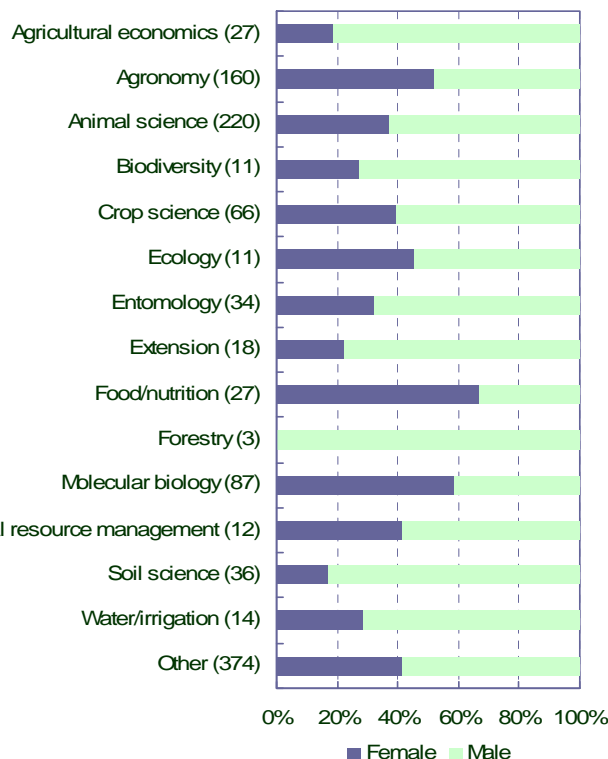
No clear relationship was observed between the proportion of female professional staff employed and their years of service at either the government or higher education agencies (Figure 6).

FIGURE 6. Years of service of professional agricultural research staff by gender, 2008



About two-thirds of the professional staff trained in food and nutrition science were female, whereas female professional staff accounted for more than half of the staff trained in agronomy and molecular biology. In contrast, few women were trained in agricultural economics (19 percent) or soil sciences (17 percent), and none of the 3 professional staff working in forestry were female (Figure 7).

FIGURE 7. Discipline-mix of professional agricultural staff by gender, 2008



Notes: The number of staff within each category is shown in parentheses. FNAS-UFS and FAFS-US were excluded due to lack of available data. None of the staff at the sample agencies was employed in fisheries in 2008.

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

Fourteen entities under the Agricultural Research Council (ARC)

CO	Central Office
GCI	Grain Crops Institute
SGL	Small Grains Institute
IIC	Institute for Industrial Crops
VOPI	Vegetable and Ornamental Plant Institute
ITSC	Institute for Tropical and Subtropical Crops
NIETV	Infruitech-Nietvoorbij
RFI	Rangeland and Forage Institute
AII	Animal Improvement Institute
ANPI	Animal Nutrition and Products Institute
OVI	Onderstepoort Veterinary Institute
PPRI	Plant Protection Research Institute
IAE	Institute for Agricultural Engineering
ICSW	Institute for Soil Climate and Water

Six higher education agencies

FNAS-UP	Faculty of Natural and Agricultural Sciences, University of Pretoria
FVS-UP	Faculty of Veterinary Science, University of Pretoria
SASA-UKZN	School of Agricultural Sciences and Agribusiness, University of KwaZulu Natal
FNA-UFS	Faculty of Natural and Agricultural Sciences, University of the Free State
SAA-UFH	School of Agriculture and Agribusiness, Faculty of Science and Agriculture, University of Fort Hare
FAFS-US	Faculty of Agriculture and Forestry Sciences, University of Stellenbosch

One nonprofit institution

SASRI	South African Sugarcane Research Institute
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For further information on the organization of agricultural research in South Africa, see http://www.asti.cgiar.org/pdf/SouthAfrica_CB14.pdf.

Departures and Promotions of Professional Agricultural Staff by Gender

For the sample agencies as a whole, 80 women and 126 men departed during 2005–07, and 44 women and 78 men were promoted (Table 1). Numbers of departing staff represent 16 and 18 percent of the female and male staff employed in 2008, respectively, and numbers of promoted staff represent 9 percent of female staff and 11 percent of male staff employed in 2008; hence, trends indicate no distinct gender differences among departed or promoted professional staff.

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 totals	
	Female	Male	Female	Male
Departures	80	126	16%	18%
Promotions	44	78	9%	11%

Training, Enrollments, and Graduations by Gender

Seven female and seven male professional staff employed in agriculture at ARC and SASRI in 2008 obtained their PhD degree during 2005–07. A slightly higher number of women completed MSc training during this time (Table 2). Overall, the shares of female and male professional staff obtaining PhD or MSc degrees during their employment were low.

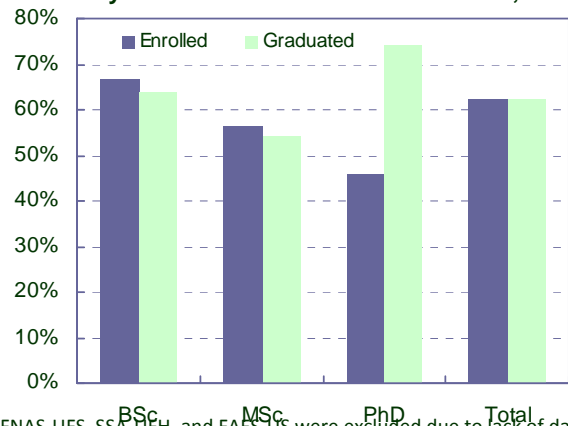
In 2007, female students accounted for more than 60 percent of the total student population at FNAS-UP, FVS-UP, and SASA-UKZN, which matched the share of female students graduating that year (Figure 8). FNAS-UP accounted for more than 70 percent of the total student population of the

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

Level of Training	Number of staff, 2005–07		Share of 2008 staff totals	
	Female	Male	Female	Male
BSc	5	8	4%	8%
MSc	11	8	9%	5%
PhD	7	7	12%	5%

three agencies in the sample. The faculty had close to 3,000 students in 2007, of which nearly 1,900 were female. Notably, the share of female students enrolled in and graduating from the three universities was much lower in the PhD programs. Female students accounted for 46 percent of the PhD student population and 74 percent of the students obtaining their PhD degrees in 2007.

FIGURE 8. Share of female students enrolled in and graduating from the University of Pretoria and University of KwaZulu Natal's three faculties, 2007



Note: FNAS-UFS, SSA-UFH, and FAFS-US were excluded due to lack of data.

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.

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.

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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).

This fact sheet was prepared by Nienke Beintema and Federica Di Marcantonio.

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