A REPORT ON THE STATUS OF WOMEN IN THE COLLEGE OF AGRICULTURE

Faculty, Graduate and Undergraduate Students, and Professional and Scientific Staff

Subcommittee Report Approved and Submitted by the University Committee on Women

Submitted to:
Provost Rollin Richmond
Iowa State University
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A Report on the Status of Women in the College of Agriculture
Faculty, Graduate and Undergraduate Students, and Professional and Scientific Staff

Introduction
Iowa State University can only be the best if it is drawing from and capitalizing on the diverse talents of everyone. As this report indicates women are underrepresented in the talent pool in some areas of the University community. Information is needed to provide guidance to the leadership in identifying and remedying those areas that do not fully include the population’s available talent.

To better inform the leadership and contribute to the University goal of becoming the best, the University Committee on Women created a subcommittee in the fall of 1999 to assess the University’s progress toward fuller inclusion of women in the University community. To initiate this process, the subcommittee conducted a pilot study on a single college to accommodate the resources available for such a study at this time. The College of Agriculture was selected for the pilot study because it is an integral component of the University’s land-grant mission; the College represents traditionally male-dominated fields where women are making progress in their participation; and the College leadership is in transition. This study is intended to provide information useful to the new leadership as it develops its plans to enhance the College and its departments.

Criteria
The Subcommittee focused its report on those departments in the College of Agriculture with the largest numbers of students in their majors, faculty, and professional and scientific staff (Table 1).

Table 1. Departments with the largest numbers of majors, faculty, and staff in the College of Agriculture.

<table>
<thead>
<tr>
<th>Students in Departmental Majors</th>
<th>Faculty</th>
<th>Professional and Scientific Staff</th>
</tr>
</thead>
<tbody>
<tr>
<td>Animal Science</td>
<td>Agronomy</td>
<td>Agronomy</td>
</tr>
<tr>
<td>Ag. Business</td>
<td>Animal Science</td>
<td>Ag. Economics</td>
</tr>
<tr>
<td>Animal Ecology</td>
<td>Ag. Biosystems</td>
<td>Animal Science</td>
</tr>
<tr>
<td>Horticulture</td>
<td>Ag. Economics</td>
<td>Horticulture</td>
</tr>
</tbody>
</table>
Description of the Data

Demographic data were obtained from various on-campus sources that routinely collect such information. The Subcommittee assembled and analyzed these data on graduate and undergraduate students within the College of Agriculture by major for selected academic years between 1980-1998. Because of the low numbers of women faculty, each year 1980-1999 was surveyed. This more comprehensive view detects the changes from year to year. Large changes indicate that some departments may not have succeeded in retaining women faculty. Only 1999 data on the professional and scientific staff were evaluated due to the difficulties in obtaining data.

Demographic trends and highlights are discussed in the body of this report. More detailed information is contained in the appendices. Each appendix contains graphs detailing the number of students and faculty in a particular area, broken down by gender and in comparison to the total number of women in the College of Agriculture.

Faculty

The number of women faculty members in the College of Agriculture has been slowly increasing (Fig. 1). In 1980, there were only 6, or 2.3%, women faculty in the entire College. Currently, 40 or 13.4% of the total College faculty of 298 are women. Across the entire University, 29% of the faculty are women (Fig. 2).

![College of Agriculture
Tenure and Tenure-track Faculty](image)

Fig. 1. College of Agriculture faculty numbers by gender and year, 1980-1999.
It is important to evaluate individual departments in the College to detect trends in terms of the total number of women faculty. Although the overall numbers are still low, several departments exhibit a slow but steady increase, with the percentages of women faculty nearly equaling that of the College; their numbers, however, are still substantially lower than the representation of men in these departments (Table 2).

Table 2. Summary of departmental trends in numbers of women faculty.

<table>
<thead>
<tr>
<th>Department</th>
<th>General Trend</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agricultural Economics</td>
<td>Slowly rising; similar percentage as College</td>
</tr>
<tr>
<td>Agronomy</td>
<td>Stagnant</td>
</tr>
<tr>
<td>Animal Ecology</td>
<td>Stagnant over entire period studied, with no women faculty during 1993.</td>
</tr>
<tr>
<td>Animal Science</td>
<td>Slowly rising, but still trailing College trend</td>
</tr>
<tr>
<td>Horticulture</td>
<td>Behavior of the percentage of women faculty somewhat erratic</td>
</tr>
<tr>
<td>College of Agriculture</td>
<td>Steady progress since late 1980s</td>
</tr>
</tbody>
</table>
Although Agronomy has the most faculty in the College, the department has shown little progress in the hiring of women faculty (Fig. 3). In contrast, Agricultural Economics, another large department in terms of faculty numbers, shows steady progress throughout the period examined (Fig. 4).

**Fig. 3.** Demographic trends in the Agronomy Department, 1980-1999. Note, the left-hand y-axis and bars indicate numbers of women and men faculty; the right-hand axis and line graphs show the percentage of women faculty in the department and College.
It is interesting to note that while the numbers of women faculty are going up, in many departments, the number of women students has simultaneously plateaued or decreased.

**Students**

In terms of undergraduate students, the percentage of women in the College of Agriculture as a whole has been steadily increasing, going from 20% in the academic year 1980-81 to 37% in 1997-98 (Fig. 5). The particular departments evaluated in this report, however, exhibit more mixed success in this respect.
Some departments have consistently fared better than the College and some have regularly done worse. Specifically, both Animal Ecology and Animal Science have had percentages of women students higher than the College's average for all the years considered (Fig. 6), contributing to the improved performance of the College. Horticulture has regularly outperformed the College, except in 1997-98. The percentages of B.Sc. degrees in Agribusiness and in Agronomy conferred on women, however, have been consistently lower than the percentage of women graduates in the College (Fig. 7).
These observations suggest that only some departments have regularly or successfully recruited—and retained—women students in their programs. Agronomy and Agribusiness have shown sporadic, but unsustained increases in their percentages of women undergraduates. Although there certainly are structural reasons for these decreases in student numbers, such as trends in the agricultural economy, it appears that these departments have difficulty in consistently recruiting and retaining women.

It is worth noting that in terms of percentage of women undergraduates, the Animal Science department outperformed the College, but the Agronomy department has regularly performed worse than the College.
At the graduate level, the College has increased the percentage of women from 19% to 30% from 1980-81 to 1997-98. Analysis of specific departments is difficult, in some cases, because of the low number of students in these programs. In the case of Agricultural Economics, for example, there has been a sharp decrease in the number of graduates overall. The numbers are so low that percentages are not significant. This decrease, however, has probably corresponded with an increase in the number of graduates in Economics, a major that is offered by the same department as Agricultural Economics. It would be necessary to analyze the performance of both programs to make meaningful conclusions. Because Horticulture and Animal Ecology have a small number of graduate students as well, we focus our comments on Agronomy and Animal Science, two departments with relatively large populations of graduate students. Both of these departments have had a lower percentage of women than the College throughout almost of the years analyzed. In the Agronomy Department, it appears that the overall number of students increased from 23 to 33 between 1996-97 and 1997-98,
but the percentage of women actually decreased from 26% to 18%. The Animal Science Department did better than the College in 1995-96, but the percentage of women decreased in the two subsequent years.

Professional & Scientific Staff

In the College of Agriculture, the number of women Professional and Scientific (P&S) staff in 1999 equal or exceed that of men only in the lowest P level, P11 (Fig. 8). The percentage of women P&S staff tends to decrease with increasing P level. Most College P&S staff are in the P13 level, where women constitute 30% of staff. It should be noted, however, that each P level encompasses a diversity of positions, making it difficult to make comparisons within and among P levels. Other reports examine equity issues in the P&S systems.

Fig. 8. Demographic trends in Professional and Scientific Staff of the College of Agriculture in 1999 by gender and P level.
The trends in percentages of women in each P level differs among departments. In Agronomy, for example, the percentage of women by P level exceeds that of the College at P15-P18 levels (Fig. 9). Agricultural Economics has no women P&S staff at or above the P15 level (Fig. 10).

Fig. 9. Demographic trends in Professional and Scientific staff in the Agronomy Dept. in 1999 by gender and P level.
**Trends and Comments**

The following graphs bring together the percentages of women faculty, and undergraduate and graduate degrees conferred in the College of Agriculture and for the selected departments; P&S data are excluded. Major change in percentages is sometimes due to the low number of faculty or students in the department and these cases are noted.

The percentage of women faculty in the College has slowly but steadily increased, and the percentage of women obtaining an undergraduate degree has almost doubled (Fig. 11). On the other hand, nearly half of the increase in women students made from the mid-80s was lost in one year, in 1997-98. In 1997-98, the percentage of higher degrees conferred to women by the College fell from 40 to 30% of the graduate degrees.
Fig. 11. Percentage of women faculty and degrees conferred in the College of Agriculture

Agronomy
The Agronomy department appears to have made some progress in terms of undergraduate women (Fig. 12). The percentage of higher degrees conferred to women in the department has tended to fluctuate, and much of the progress made in the 1980s appears not to have been a sustained change. The number of women faculty has stagnated at very low levels, a particularly worrisome fact since the department of Agronomy is one of the largest in the College in faculty terms.
Animal Science
The Animal Science department has shown a very slow but steady increase in terms of faculty, going from no women on faculty in 1980 to four women (out of 50) in 1997-98. In terms of undergraduates, the increase in the percentage of women has been much more pronounced, and both in 1996 and in 1997, more than half of the B.Sc. degrees conferred have gone to women. The department's performance in terms of higher degrees appears more mixed. The number of degrees conferred, however, is relatively few; the numbers range from 34 in 1985-87 to 18 in 1997-98.

Economics
The analysis of the situation in Agricultural Economics must account for the fact that the Economics Department offers degrees in both Economics and Agricultural Economics. In recent years, the department has been conferring fewer higher degrees in Agricultural Economics. Therefore, the very low number of degrees conferred can explain the erratic behavior in terms of percentage of women (Fig. 13). In terms of women faculty, the department has witnessed a steady, but slow increase. Once again, a fuller analysis would require data on the whole faculty, including appointments in the College of Liberal Arts and Sciences. As for undergraduate degrees, the department offers a degree in Agricultural Business. The percentage of women receiving this
degree has almost doubled since the 1980s, even though there appears to have been a small decline in the late 1990s.

**Students and Faculty in Agricultural Economics**

![Graph showing trends in Agricultural Economics](image)

Fig. 13. Trends in Agricultural Economics.

**Animal Ecology**

The number of graduate students in this department is and has always been very small, so the percentage values show little (Fig. 14). On the other hand, although the number of undergraduates was very low in the 1980s, they have increased to a significant figure in the late 1990s; the percentage of women is significant, and greater than the College’s average. In terms of faculty, whose size has oscillated between 10 and 12 members, the department has obviously stagnated.
Horticulture
The Horticulture Department has historically had a relatively high percentage of women in its undergraduate population (Fig. 15). The number of higher degrees conferred is very low (never higher then 10, and therefore the percentages are not significant. The number of faculty is relatively small as well; however, the impression that the department has had problems in keeping women faculty implicit in this graph is confirmed by the graph detailing yearly data included in the appendix.
Summary of Findings

The results of this survey indicate the following:

1) Women are underrepresented among faculty in a number of College of Agriculture departments.

2) In terms of the number of faculty women, certain departments are doing better than the College. While these departments are doing well and improving the statistics for the College, others are less successful.

3) The numbers of female students are increasing in the majority of College of Agriculture departments. The growth in student numbers in the College since 1980 is a direct consequence of the increased number of women students; the number of men has remained nearly constant during this period.

4) Among the Professional and Scientific staff, women are concentrated at the lower classification levels of P11-P14. Due to the smaller numbers of both women and men at the higher classification levels, there tends to be better equity.
Recommendations

Based on the findings of this pilot study, the University Committee on Women recommends that this information be communicated, additional information be gathered, and plans for improvement be implemented. More specifically, the Committee recommends:

1) This report be distributed and discussed with the College of Agriculture and its departments.

2) Iowa State University must direct its efforts toward attracting and retaining underrepresented groups.
   - The Provost needs to again emphasize the importance of diversity in the search process for each college within the University.
   - The Provost should encourage the College and departments to develop and implement plans to increase the numbers of women at all levels.

3) The Provost should request and distribute annual reports from colleges and departments to monitor changes in the status of women.

4) The University should obtain and analyze similar data from peer institutions.
Appendices

A: Faculty
B: Students
C: Professional and Scientific Staff

These appendices show the demographic trends of women in the respective departments. In each graph, the left-hand y-axis and bars indicate numbers of women and men faculty; students, or staff, and the right-hand axis and line graphs show the percentage of women faculty, students, or staff in the department and/or College.

Appendix A: Faculty

![Agricultural Economics Graph]
Appendix B: Undergraduates

**B.Sc. in Agribusiness**

- Men
- Women
- Agribusiness % Women
- CoA % Women

**B.Sc. in Agronomy**

- Men
- Women
- Agronomy % Women
- CoA % Women
Appendix B: Graduates

Masters and Ph.D.s in Agricultural Economics

Number of degrees conferred

Year

% Women

Men Women % Women

0 10 20 30 40 50 60


B.Sc. in Horticulture

Number of B.Sc. conferred

Year

% Women

Men Women Horticulture % Women CoA % Women

0 10 20 30 40 50 60

Appendix C: Professional and Scientific Staff

P&S Staff in Agricultural Economics

P&S Staff in Agronomy