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STATEMENT OF
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BEFORE THE
SUBCOMMITTEE ON INVESTIGATIONS AND OVERSIGHT,
HOUSE COMMITTEE ON SCIENCE AND TECHNOLOGY

ON

USE OF FEDERALLY SUPPORTED RESEARCH FACILITIES

MR. CHAIRMAN AND MEMBERS OF THE SUBCOMMITTEE:

We are here today at the request of the Subcommittee to discuss the joint use of federally supported research facilities by industry and universities. You asked us to explore with you how a stronger industry/university relationship would increase, as an example, the viability of the Agricultural Research Service's (ARS) cotton gin laboratory at New Mexico State University.

This testimony is based on our report, "Federal Agricultural Research Facilities Are Underused," issued on January 14, 1983 (GAO/RCED-83-20). Although our work did not include the cotton gin laboratory, we believe that the issues addressed in our report are relevant to the focus of your hearing.

In our report we concluded that many of ARS' 148 domestic research locations were not staffed to their designed capacity--a condition which makes individual research projects more expensive.

According to the most current national figures available at the time of our review, ARS had research space for about 3,275 scientists. At that time ARS had 2,403 of its own scientists using the space, or about 73 percent of the rated capacity. There were also 317 non-ARS scientists, or about 10 percent of the rated capacity, also using the space. The percentage of use at individual facilities varied from over 100 percent of designed capacity to as low as 17 percent of capacity. The overall underuse has resulted primarily from a declining personnel ceiling as well as construction of new facilities.

Notwithstanding the underuse of existing laboratories, new laboratories are still being planned. These additional facilities could further reduce the overall rate of use because ARS' personnel ceiling is not expected to rise in the foreseeable future.

To fully use its existing research facilities, ARS would require a substantial increase in its annual appropriations and higher personnel ceilings--something that is not likely to happen considering today's projected Federal budget cuts and growing deficits.

ARS has closed some facilities and transferred staff to other locations to improve facility use. However, ARS told us that this approach had not been very successful because those affected by the closings pressured ARS to keep the facilities open. As a result, some facilities were still operating that would have been discontinued with the resources redirected to higher priority research.

ARS has tried other ways to improve facility use. It has leased or otherwise provided research space to other Federal or State agencies. Space at some locations has been more fully utilized because of the non-ARS scientists working there. ARS stated that this sharing of facilities improves communications among the scientists and enables the sharing agencies to carry out their roles and missions more effectively. ARS also has improved facility use with support personnel, and at times scientists, hired under cooperative agreements with State agricultural experiment stations or other educational institutions.

In addition, ARS has contracted out certain support services at large research facilities so as to retain scientists and technicians. These services included engineering, plant management, janitorial, and general services.

With continued ARS hiring and funding constraints, the problem of underused Federal laboratory space for agricultural research likely will continue. Bringing in State employees under cooperative agreements or leasing space to other Federal agencies helps improve laboratory use, but these alternatives will not likely solve the problem. States are sometimes reluctant to use Federal research facilities either because they are not designed to meet State needs or because of differing geographic locations. Also, other Federal agencies are faced with funding and staff limitation problems similar to those ARS faces. In the existing environment of projected Federal budget cuts and growing deficits, closing research facilities and, where appropriate, consolidating their functions with others,

may be the most viable alternative available for reducing underused capacity.

ARS does not have a comprehensive plan to reduce the number of ARS-owned research locations. Any plan to close laboratories will need to be well coordinated and justified to those parties having an impact on the decision process. In developing a plan, factors such as the following need to be considered in determining which facilities to close.

First, scientists need to interact with enough other scientists to promote idea exchange and problem solving. During the Department of Agriculture's appropriation hearings for fiscal year 1979, the Assistant Secretary for Conservation, Research, and Education stated that laboratories with fewer than 10 scientists were not a viable "critical mass" in which enough scientists can interact to solve research problems in a reasonable period of time. A 1980 House Appropriations Committee report recognized that some research locations with fewer than 10 scientists were within or near State or other Federal research facilities and therefore had a critical mass when their resources were combined.

A second factor to consider in developing a comprehensive plan is that fewer locations could make more efficient use of scientific and other equipment and specialized buildings. Also, the administrators of all four ARS regional research centers said that available, up-to-date scientific equipment was an advantage their scientists had over scientists at smaller

locations, unless the smaller labs were at or very near a university. Larger facilities also are better able to justify employing technicians to operate specialized equipment. Some scientists at small locations use research time to develop these skills. An additional advantage of fewer research locations is that it should require fewer area offices and less administrative support and overhead.

On the other hand, small research locations do allow for site-specific research. There are scientific reasons for conducting research in certain locales and not others, including (1) capacity to grow more than one crop in a growing season, (2) proximity to research problems, or (3) ability to contain disease organisms. These reasons may be a factor which in some cases overrides the interaction and efficiency issues. In these cases ARS could consider using cooperative agreements with State agricultural experiment stations, in conjunction with land-grant colleges and universities, to accomplish appropriate site-specific research. ARS has used such agreements successfully in the past.

Another factor to consider in any plans to close research laboratories is that ARS would be required to move or lay off Federal employees and to pay associated costs. According to ARS Western Regional Office officials, moving one employee costs between $12,000 and $15,000. These costs would have to be offset by the potential sales value or alternative use of unneeded

laboratories and any reduction in operating and maintenance costs. The costs would not include the cost to the employee of possibly moving to a higher cost-of-living area or having to pay a higher mortgage interest rate for a home. It is also difficult to place a price on the cost to morale of uprooting a scientist and family and redirecting the scientist's career.

Such a career change, according to ARS officials, may have long-range professional and financial repercussions to a scientist. Because much ARS research is long term, a scientist may work for several years to achieve publishable results. Publications are one element that supervisors consider when deciding to promote a scientist. Therefore, a scientist who starts new research as a result of a move and experiences the expected delay before publishing the results may not be promoted as soon as if the move did not take place.

Another factor to consider is the large number of scientists reaching retirement age. A recent Senate report stated that the average age of ARS scientists was rapidly approaching 50 years. This could indicate that changes in research facilities and personnel may be more feasible in the near future.

Finally, the establishment of research priorities is an important factor in developing a comprehensive plan.

In our report, we recommended that the Secretary of Agriculture develop a plan to consolidate agricultural research activities at fewer locations, thereby allowing greater scientist interaction and more efficient use of equipment,

facilities, and administrative resources. We added that the plan also needs to address research priorities, personal and career plans of ARS employees, the costs of relocating employees, and the potential sales values or other uses of unneeded laboratories. We also recommended that the Secretary submit the plan to the appropriate committees of the Congress for their review and comments.

The Department replied that ARS was developing a strategic plan to use as a basis for future research management. It added that the implementation and operational plans that support the strategic plan should be an excellent basis for the Secretary of Agriculture to assure consolidation of research and permit greater scientist interaction for more efficient use of equipment, facilities, and administrative resources.

This concludes my statement, Mr. Chairman. My colleague and I will be happy to respond to any questions.