ARTICLES

Special reviews of agronomic research, extension, and teaching

T. S. Ronningen

ABSTRACT

The special review is a service provided to cooperating institutions by units of the Science and Education Administration (SEA) of USDA upon their request. The service is provided to state institutions who receive continuing federal financial support for research, extension, and teaching through SEA. Since the special review service was inaugurated in 1972, a total of 535 special reviews have been held. Over 70 requests for this service have been honored each year for the past several years.

Additional index words: Agricultural research, Extension and/or teaching, Federal support, Program improvement.

PURPOSE AND PHILOSOPHY

The primary purposes of special reviews have been to assist in the improvement of planning, program orientation, quality, relevance, and coordination, separately or in some combination. Thus, they are forward-looking, in contrast to reviews which assess present and past performance.

The special review is intended to serve the needs of the groups who request it. It is based on three primary assumptions: 1) that researchers, extension specialists, and teachers in groups or departments, along with their administrators, can and should participate in planning for program improvements; 2) that there are propitious times when groups or departments should reassess their programs; and 3) that outside advice and reaction will likely be helpful.

Changing circumstances may suggest or even require reassessment of programs, which may be aided through appropriate adaptation and use of the special review service. Such changes may include increased need for basic and interdisciplinary research that requires improved interactions across scientific, departmental, or college and even institutional lines, needs for improved interactions between research and extension, improved effectiveness needed for teaching processes, changes in support personnel, staff resignations and retirements, and changes in physical resources or institutional policies.

Factors external to the performing organization may suggest or require reconsideration of programs: expansions or reductions in similar programs in neighboring states, changes in USDA research, emerging problems or opportunities in the state's agriculture, shifts in national or regional priorities affecting research and extension, changes in availability of funds, and increased emphasis on related factors such as the environment, energy, food safety, and the special needs of small farmers. Increased involvement of universities to serve international needs as may occur under Title XII of the International Development and Food Assistance Act of 1975 may require readjustments of major magnitude.

There are a number of ways by which internal and external issues can be addressed, can have priorities set on them, and reflected through identification of alternative courses of action. The special review culminates processes designed to identify ways a program can be made more responsive and effective. A visiting panel of scientists, educators, or other appropriate experts selected by the resident group, react to the proposals and alternatives identified by those in residence participating in the review. The combination of inside and outside views provides a richer mix of perspectives and views on which to base subsequent administrative decisions.

VALUE OF THE REVIEWS

Special reviews only occur if they are asked for by a cooperating state research, extension, or teaching institution. Since over 70 such reviews are now being requested each year, we conclude that this service is useful.

Agronomic research has been the subject of all or a part of 93 special reviews since 1972. Many of those reviews have included extension. A lesser number have
addressed teaching. Seventeen additional reviews are planned for fiscal year 1979. An increasing proportion of special reviews in recent years have included or are including teaching, extension, and research.

Two science and technology subcommittees of the U.S. House of Representatives recommended wider use of special reviews at the conclusion of their review of agricultural research and development (1). They saw special review as a means of helping to improve research and “aid in improving the coordination of federal-state and state-state agricultural research efforts.” They saw the use of highly qualified scientists on the review teams as a new and effective use of “peer panels” to improve research. They encouraged more use of scientists from outside USDA-state agricultural experiment stations on review panels.

No attempt has been made by the sponsoring USDA unit to require or request identification of actions taken or not taken as consequence of special review recommendations. However, voluntary feedback has contained evidence of how those recommendations have helped bring about constructive changes. These changes have included organizational modifications, increasing basic research competence, achieving better balance of teaching and research loads, improvements in physical resources, more effective advisory mechanisms, improved technical support, improved USDA-state interactions, more effective multidisciplinary and interdisciplinary research, greater use of extension expertise to identify research needs, improvements in administrative processes, and improved interactions of agronomic scientists with scientists from other disciplines in planning and carrying out research, extension, and teaching.

The concept of special reviews grew out of our experiences with comprehensive reviews (2). The requests for comprehensive reviews had tapered off. A re-examination suggested that more flexible procedures were needed to adapt the process more precisely and effectively to the needs of the requesting state group. As a result, the procedure of the special review is determined after the purpose and coverage of the review is determined. A modification of terminology seemed necessary to reflect what turned out to be an important change in concept.

The evolution toward the special review was also a part of a change in policy. The former Cooperative State Research Service (CSRS), which originated the special review service, always tried to be of service to its client state research institutions. However, there used to be substantial emphasis placed on surveillance of research progress and financial accountability. By substantially reducing surveillance activities, the agency was able to divert much of its scientific and other resources to serving special needs of the cooperating institutions as they saw them.

**COVERAGE AND ORIENTATION OF REVIEWS**

Most of the 93 reviews since 1972 included programs of agronomy departments or soils or crops where those programs were departmentally separate. Some covered plant sciences in addition to agronomy. Some reviews centered on commodities; four focused on forage programs; whereas others were limited to feed grains or single major crops. Some reviews have included animal science inputs, particularly those programs dealing with feed and forage utilization.

Some of the more recent reviews were jointly planned and conducted by the Agricultural Research Service, now Science and Education Administration, Agricultural Research (SEA-AR), a state agricultural experiment station, and the former CSRS. The AR scientists and their research located at a state station often have been included in state station-sponsored special reviews. Extension specialists generally have participated in research reviews as well as in those with formal extension components.

Additional kinds of special reviews have covered administrative processes of a state agricultural experiment station and overviews of total forestry or total agricultural research programs within a state.

Experiences summarized above show that special reviews can be used with great flexibility and in ways to meet special needs at individual institutions and involving two or more institutions with common aims.

**Characteristics Contributing to Success or Disappointment**

Many special reviews have successfully met the needs of groups requesting them. Others have fallen short of expectations. Certain characteristics seem to be associated with success or disappointment. They are summarized in Table 1.

The first two characteristics have proved to be most significant. If the staff and their administrators agreed in advance that there was a need to plan ahead to improve their programs and if reasonable flexibilities for change existed, the chances for success and satisfaction were great. Conversely, if the first two conditions weren’t met, they were not compensated for by other desirable procedures. Other factors have also proved important. Generally, the scope and depth of the review should not exceed that which can be covered well within a normal work week or less. All of the scientists and specialists whose work is to be included should be present and be prepared to participate in all of the sessions. Their presence is necessary to fully consider interdependencies among units, to reconcile demands, and to share in appraising future plans, projections, and alternatives.

The cross-discussion among resident staff members who are familiar with local problems and operating resources is a very significant part of the review process. A chairman, preferably from the resident group, needs to encourage discussion, suggestions, and comments by all participants yet see that each part of the program gets adequate time treatment. Participating scientists should have an opportunity to hear the recommendations of the visiting panelists before they leave and react to them if they wish. The visiting group should provide a written
Table 1. Characteristics and procedures contributing to success or disappointment in special reviews

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<th>Success</th>
<th>Disappointment</th>
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<tr>
<td>1. The resident staff saw the need to plan ahead and improve programs.</td>
<td>1. The resident staff saw the process as being limited to meeting external requirements for research inspection or review or as a requirement imposed by administration.</td>
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<td>2. Needs or opportunities for change existed (new department head, staff resignations or retirements, additional staff, funds and facilities, etc.).</td>
<td>2. Reviews were held only on a regular time schedule—missing opportunities for change.</td>
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<td>3. The objectives of the review were developed by the host institution and agreed upon by the staff involved in the review and their administrative head.</td>
<td>3. The review was “decided upon” by the research, extension or resident instruction director without adequate follow through with department heads and staff concerned.</td>
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<td>4. The resident staff planned carefully for the review including identification of questions and alternatives related to program improvement and preparing the information which would enable the visiting panel to understand the problems toward which research, extension or teaching was directed.</td>
<td>4. The resident staff depended on the visitors to ask the “right” questions and to provide useful suggestions.</td>
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<td>5. Good choices of outside expertise were made.</td>
<td>5. Very few poor choices have been made. Hence, there have been few disappointments in the people chosen.</td>
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<td>6. Sufficient lead time was provided to develop plans, to contact panel members, to develop background materials, and to provide time for the visiting panel members to study the background and review materials.</td>
<td>6. Insufficient lead time was provided to prepare properly for the review.</td>
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<td>7. The agenda was developed mutually by the institution and CSRS with adequate time for discussion and for visiting panelists to develop and present their recommendations and receive reactions from the resident staff.</td>
<td>7. Too little time was provided in the agenda.</td>
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<td>8. Visiting panel members were apprised of needs and expectations of the session by appropriate officials.</td>
<td>8. Visiting panel members were unaware of those needs and expectations.</td>
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<td>9. Ideas and reactions were freely exchanged among participants.</td>
<td>9. Each staff member reported on his activities. Discussion took place only between the staff member and the visiting reviewers.</td>
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<td>10. Research was related to needs of the public intended to be served as well as in terms of scientific significance.</td>
<td>10. Sometimes only the scientifically significant advances were mentioned with no attempt to relate research to practical needs, missions or goals.</td>
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<td>11. The visiting panel was used as reactors to future plans or alternatives generated by the resident staff.</td>
<td>11. The resident staff reported present status and recent progress of projects. The visiting panel was thereby limited to reactions of “what might have been done otherwise.”</td>
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<td>12. Oral and written reports of reactions and recommendations were complete, frank, relevant to issues raised by the resident group and were promptly prepared.</td>
<td>12. Reports were not sufficiently critical or the delay in finalizing the report was too great.</td>
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The purpose of this paper is as much to identify or suggest potential future uses of special review processes as to describe and interpret the results of past experiences. The reason? It is intended to stimulate agronomists and their administrators to visualize ways in which special reviews can be organized to meet their short and long-term needs for planning and program improvement.

Special reviews are a means for joining in common discussion appraisals of practical needs, assessments of scientific and technical feasibilities, and educated estimates of potential impacts of research or extension thrusts or new teaching approaches, if successful. They provide opportunity for interactions between viewpoints within and with outside groups and among scientists of the same and different disciplines and for consideration of local, regional, and national and international priorities.
The special review provides opportunity for ideas for program improvement to compete in common forum. It gives each scientist, specialist, or teacher a chance to observe reactions to his or her future preferences from a subgroup of knowledgeable colleagues, in and outside his institution, for each of them to react to proposals of the others, and for all to see their plans as a part of a larger program.

The written report of recommendations and reactions becomes the property of the group requesting the special review. The recommendations are only advisory. To the extent the recommendations are deemed useful, however, they often become an important part of the justification for useful change.

The 70 or more requests for special reviews each year reflect substantial optimism by the requesting state institutions that the reviews have been and will be useful to them. The SEA will continue to provide staff scientists and share in per diem and travel costs of outside consultants to assist the process so long as such reviews are seen as useful by staff members and administrators of client institutions.

LITERATURE CITED