

WESTERN ASSOCIATION OF AGRICULTURAL EXPERIMENT STATION DIRECTORS  
AND  
UNITED STATES DEPARTMENT OF AGRICULTURE  
211 POST OFFICE BUILDING  
BERKELEY 1, CALIFORNIA

August 17, 1966

OFFICE OF THE  
RECORDING SECRETARY

TO : Western Directors

FROM : Leo R. Gray, Recording Secretary *L.R.G.*

SUBJECT: Minutes of Summer Meeting, July 18-21, 1966

Attached are the Minutes of your recent meeting.

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MINUTES OF WESTERN DIRECTORS'  
REGULAR SUMMER MEETING

Oregon State University  
Corvallis and Newport, Oregon  
July 18-21, 1966

Call to Order  
and Attendance

Chairman Bohmont called the meeting to order at 9 a.m.  
Those present during all or part of the meeting included:

R. K. Frevert	Arizona
C. F. Kelly	California
E. G. Linsley	California
Rue Jensen	Colorado
D. F. Hervey	Colorado
G. D. Sherman	Hawaii
R. D. Ensign	Idaho
J. A. Asleson	Montana
D. W. Bohmont	Nevada
R. E. Ely	Nevada
P. J. Leyendecker	New Mexico
M. L. Wilson	New Mexico
W. T. Cooney	Oregon
G. B. Wood	Oregon
R. M. Alexander	Oregon
R. W. Henderson	Oregon
W. H. Foote	Oregon
D. W. Thorne	Utah
K. W. Hill	Utah
M. T. Buchanan	Washington
N. W. Hilston	Wyoming
L. C. Ayres	Wyoming
T. C. Byerly	CSRS
N. F. Farris	CSRS
J. H. Jensen	Oregon
R. A. Young	Oregon
R. Calender	Oregon
H. W. Schultz	Oregon
L. A. Sather	Oregon
R. Bogart	Oregon
R. S. Besse	Oregon
W. J. Goodwin	USPHS
Mariano Segura	Peru Department of Agriculture
L. R. Gray	Recording Secretary

Introductions and  
Announcements

Thorne announced the appointment of K. W. Hill as Director  
of the Utah Agricultural Experiment Station.

Hervey introduced Dr. Rue Jensen, the new Vice President for Research at Colorado State University and Director of the Colorado Agricultural Experiment Station. Jensen assured the group of his desires to become a member in good standing of the Association.

Wood and Henderson introduced visitors from Oregon State University, namely:

Dr. J. H. Jensen, President  
Dr. Roy Young, Director of Research  
Dean W. T. Cooney, School of Agriculture  
Dr. Ralph Besse (retired), a founder of the  
Western Directors' Association  
Dr. W. H. Foote  
Dr. Rudy Calender, Administrator of Forest  
Products Research Laboratory  
Dr. Harold Schultz, Head, Food Science and  
Technology Department  
Mrs. Lois Sather, Food Science and Technology  
Department  
Dr. Ralph Bogart, Animal Science Department

At a later session, Hervey introduced Mariano Segura from Lima, Peru. Mr. Segura is Acting Director of all agricultural research in the Department of Agriculture of Peru.

#### March 1966 Minutes

/Buchanan moved, M. L. Wilson seconded, that Minutes of the March 1966 meetings be approved as distributed. Passed.

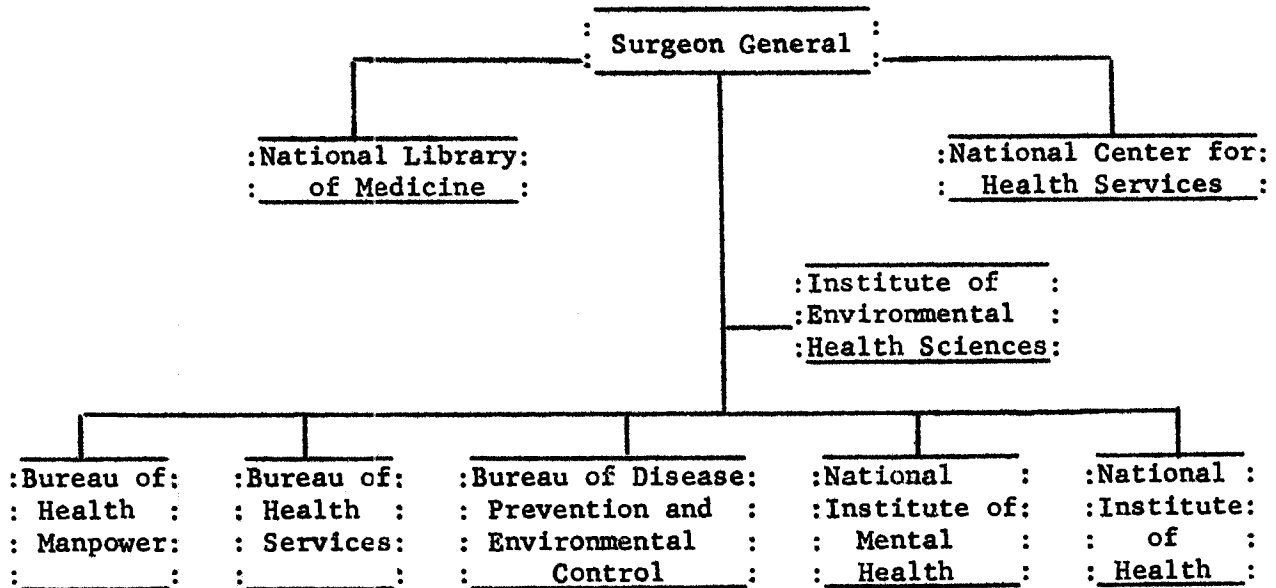
#### Environmental Health Sciences Grant Program

Bohmont introduced Dr. William J. Goodwin who is Chief of the Research and Training Grants Branch, Office of Resource Development, Public Health Service, U. S. Department of Health, Education, and Welfare, in Bethesda, Maryland. Dr. Goodwin spoke about the "Role of Agricultural Experiment Stations in the Environmental Health Sciences Research and Research Training Grants Program of the Public Health Service."

Goodwin - Support for research and research training is available in seven broad areas, namely: 1) Human biology and ecology; 2) environmental biology and ecology; 3) environmental toxicology; 4) exploratory research; 5) environmental quality engineering and quantitative measurements; 6) environmental health planning; and 7) environmental health management.

Agricultural Experiment Stations are already participating in multidisciplinary research training with Environmental Health Sciences Grants. Renewal grants tend to have an edge over new grants in obtaining a priority grant rating, especially if the grantee has proven himself through his work.

The structural organization of the Public Health Service (PHS) was presented as follows:



The Institute of Environmental Health Sciences is new, and it functions as a basic research element of PHS. There are three Divisions in this Institute that support programs of interest to Agricultural Experiment Stations, namely: 1) Air Pollution Division; 2) Environmental Engineering and Food Protection Division; and 3) Occupational Health Division.

Goodwin mentioned two general policy and information statements that are now available, and should be of interest to Western Directors. They are:

- 1) "Biomedical Sciences Support Grant," March 1966. A grant program for academic institutions (exclusive of Health professional schools); and
- 2) "Health Sciences Advancement Awards," April 1966. A grant program for the development of the Health Sciences in institutions of higher education.

A basic requirement for these grant funds is that you need \$200,000 worth of NIH money before you can qualify. These administrative documents are issued by the General Research Support Branch, Division of Research Facilities and Resources, NIH, U. S. Department of Health, Education, and Welfare, Bethesda, Maryland 20014.

Byerly - The whole problem of handling solid wastes needs more coordination among PHS, USDI, and USDA. They are all working in the same area but they aren't competing with one another, although their efforts do sometimes overlap.

Comments of CSRS  
Representatives

Byerly - The status of legislation of interest to Western Directors was discussed. The Senate passed its Appropriation Bill for fiscal 1967 as released on July 12. It provides \$53,113,000 for grant-in-aid payments to State Agricultural Experiment Stations - an increase of \$5 million over the House Bill and \$13.5 million over the budget estimate. About \$3 million of the increased appropriation will be utilized by the States for making pay adjustments. The other \$2 million will go to strengthen the regular program in the several States. The Senate and House differences now have to be resolved.

CSRS will distribute the increased funds among the States according to the Hatch Act formula. Station Directors however, will be responsible for redistributing funds within their States, and for defending their position to account for the pay act adjustment subject to examination and clarification under an audit.

The \$4.91 million requested by the Administration for contracts and grants for scientific research was scaled down to \$2 million - the same amount appropriated for FY 1966. Four hundred thousand dollars of this amount was earmarked under CSRS for basic research grants on soybeans. The remaining \$1.6 million was not earmarked for special basic research grants.

Program-Planning Budgeting System (PPBS) - Western Directors and other program administrators working with Federal funds should acquaint themselves with PPBS if they have not done so already. Five purposes of PPBS, as stated by the President on August 25, 1965, are:

- "1) Identify our National goals with precision and on a continuing basis.
- 2) Choose among those goals the ones that are most urgent.
- 3) Search for alternative means of reaching those goals most effectively at the least cost.
- 4) Inform ourselves not merely on next year's costs - but on the second, and third, and subsequent years' costs - of our programs.
- 5) Measure the performance of our programs to insure a dollar's worth of service for each dollar spent."

A major problem in approaching cost effectiveness is: How effectively can you measure social benefits?

Based on a study of over 100,000 professionals, there is positive correlation between quantity and quality of work output by professionals. In FY 1966, the Western Region had 1836 professional people, and released 2263 primary printed publications of new research results. The publication ratio ranged from a low of 9 people to 1.0 publication, to a high of 1 professional to 1.8 publications. (NOTE: This is the first crude measure of productivity based upon printed publications, but it is not a refined effort.)

George Mehren has the responsibility of developing packages of researchable questions. Numerous such researchable packages are currently under consideration, including:

1. A panel has been formed to discuss research devoted to the general area of community development. The Economic Development Division, ERS, has submitted a reported package on social development to the Director of Science and Education of USDA. This package covers their community development efforts and proposals. (This was formerly considered as the "Poverty" Program package.)
2. Basic research is needed on labor-mechanical substitutions (as a package area approach to community development).
3. Development of least-cost systems for the production of quality pork. The Committee of Nine authorized \$10,000 for a meeting to study the swine industry.
4. The Soybean industry has donated \$180,000 to ARS, and \$150,000 to ERS for the study of basic research problems. This industry so far has thrived with a minimum amount of research.
5. Waste management development research on environmental improvement (as a package area approach to handle problems of pollution).
6. Developmental research package on weather modifications.
7. Other researchable packages under consideration concern problem areas related to: the beef and dairy industries, human nutrition, water, range, resource development, and marketing.

It is not known when or if these packages will be submitted as such for purposes of final budget package consideration.



The Senate Committee on Foreign Relations has gone along with the House Committee in approving the use of technical assistance funds by A.I.D. for assistance to research and educational institutions in the U. S. for the purpose of strengthening their capacity to develop the resources likely to be needed for programs concerned with the economic and social development of less developed countries. "It is the Committee's understanding that AID plans to use approximately \$10 million for this new program in the 1967 fiscal year."

Among the eight program areas in the Report of the Long Range Planning Committee, the marketing research area needs more attention. Marketing is a major area in which consumers spend their funds. Western Directors should consider having their people produce more important and effective marketing research results.

There are numerous areas of research in which the number of scientific man-years can grow. Western Directors should continue to express their opinions as to what research problems they think are important without waiting for the initiative to come from Washington.

Both USDA and SAES should make more considered judgments as to whether they consider nutrition research to be a significant package for research.

In response to the question: "Should the broad area of air pollution or environmental contamination be considered as a package area for SAES research?" Byerly replied: "What agriculture contributes to the environment, what agriculture suffers from contamination of the environment, and what agriculture intends or can do about affecting the environment are researchable areas that should be considered by SAES."

Committee  
Appointments

Bohmont appointed the following committees for this meeting: 1) The RRC as a Nominating Committee for the selection of a ballot for the 1966 elections; 2) a Resolutions Committee consisting of: Sherman, Chairman; Ayres, and Kelly; and 3) a revised Regional Director Committee, consisting of: Asleson, Chairman; Buchanan, and Linsley (replacing Kraus), to work on the recommendation concerning the position of a Western Regional Research Planning Director

Regional Research  
Planning Director

Asleson - The Committee accepted the fact that Western Directors had gone on record as accepting, in principle, the establishment of a Western Regional Research Planning Director.

The cooperative agreement among Southern Stations was discussed, especially as related to the duties of a Director-at-large for the Region. Duties in the Southern Agreement are essentially the same as those in the Agreement among North Central Directors.

Byerly - You cannot legally delegate your responsibility and authority as Directors to such a "Regional Director". Thus, such a man would not have the authority to either speak for Western Directors, nor commit them to anything, but he could serve as a listening post.

Such an individual would not be expected to duplicate operations or actions such as ESCOP.

The future of RPDES has not been established.

RRC and C/9 are responsible only for regional research programs, whereas such a "Regional Director" position would be responsible for coordinating all aspects of RRC, C/9, ESCOP and so on, as related to the various duties specified for the position.

Frevert - ESCOP will establish a subcommittee on the LRPC that will be composed of four regional coordinators as representatives for the Directors' associations. This subcommittee would consist of Regional Directors appointed by the North Central and Southern Regions, and the one to be authorized by the Western Directors, and the one to be considered by the Northeastern Directors. We must also consider our representation on this planned subcommittee.

Regarding use of the title of "Director," it was intended to give the position status but the position should be considered as a staff position, and the occupant of the position would function as a coordinator.

Byerly - If you (WD) decide on this position would you feel more assured of success in strengthening the operation of such a position if CSRS would assign a man as his counterpart for each region? N. F. Farris is retiring, and his replacement could be selected by mutual agreement with each region to work with such regional coordinators as selected by each region. Thus, you would be doubling the manpower available to gather and analyze data. The man on the CSRS staff would have more responsibility than regional research activities. He would be located in the respective region in an office in close proximity to the regional coordinator's.

After taking time to "mull over" Byerly's offer of a CSRS staff man as a counterpart, there was considerable discussion at later sessions, and then the following motion and revised motion were made:

/Linsley moved that since we have not had experience with the Director-at-Large concept, we defer official action on Byerly's proposal for a CSRS counterpart man until we have had more experience with the Director-at-Large position. Wood seconded. No action was taken.

/Thorne suggested rewording Linsley's motion to read: "Until we have more clearly defined the duties and responsibilities of our Director-at-Large, we would prefer not recommending his specific relationships with CSRS, and would therefore defer action on deciding upon Byerly's offer for a CSRS man to work as a counterpart with the Western Director-at-Large." Linsley and Wood concurred. The "revised" motion passed.

/In the meantime, Leyendecker moved, Sherman seconded, that Western Directors approve of a position of Director-at-Large or some other appropriate title. Passed.

Bohmont - The Committee (of Asleson, Buchanan, and Linsley) is delegated the responsibility of writing up a job description for such a position - which will include processes of selection, location of position, and time period. The survey and selection of the individual applicants, however, would be reserved for the Executive Committee of Western Directors. The Executive Committee of WD consists of the Chairman, Vice Chairman, and Secretary.

Buchanan suggested, and the Western Directors concurred, that the Chairman of RRC be included as part of the Executive Committee of Western Directors for the selection of this individual, and that this assignment by Bohmont to this committee be part of the agreement which will have to be signed by the cooperating States.

/After consultation with the Nominating Committee, at Bohmont's request, Leyendecker moved, Wood seconded, that Frevert be designated to temporarily represent the Western Directors on the new ESCOP Subcommittee of Regional Directors on the Long Range Planning Committee until a Director-at-Large is hired, and that travel expenses for this purpose be paid out of the Western Directors' Administrative Fund now at Montana rather than out of Arizona funds. Passed.

Buchanan - There should be some organic tie between the group of four regional directors and Thackery's office.

Frevert - The University of Maryland campus has been suggested as a good place to station such a man while in Washington, D. C.

Thorne - Maybe WD should rent a bachelor apartment in Washington, D. C. for the man. Frevert concurred that LRPC could have benefited from the availability of a bachelor apartment.

Farris - There has been some talk as to where such a man should be located - in Washington, D. C. or at one of the Stations.

Linsley - California could consider handling such a man on the Berkeley Campus. He agreed to look into the feasibility of locating such a position at Berkeley with available fringe benefits of California.

Ensign - There may be some advantage if the individual is tied in some way with the Recording Secretary.

Bohmont - Consideration should be given to desires of the individual selected, but Western Directors should have the final say as to where he will be located.

Bohmont - Western Directors will compile details of their preferences regarding the position of "Regional Director," and send their comments to Asleson, who will be responsible for compiling a final overall agreement that will be effective as of the date of the last signature.

Western Directors will send information on their interests in locating such a position at their Station to the Recording Secretary who will compile it and send it to Asleson by September 1, 1966.

Any suggestions, comments and so forth of the Executive Committee of WD should be sent to all Western Directors.

Asleson - The cost estimated for the North Central position is \$60,000. The committee agreed that a similar position for the Western Region should have an annual rate of at least \$40,000 budgeted for the first year. The first year will be a short year. No final agreement on a set figure was reached by the committee.

Bohmont pointed out that unless all States participate in committing funds to such a position, there would be an immediate weakness in the regional position of such a man.

Byerly would hesitate to recommend use of Federal funds for such a position. He saw no restraint for the use of Hatch Formula Funds, since they have been ruled to be State funds after they have been paid out. Regional Research Funds however, are considered to be Federal funds in the hands of

the Secretary of Agriculture, so if you consider using RRF, you should be careful in considering the extent to which such a man could go.

Asleson moved, Wood seconded, that the budget for this position of Director-at-Large for the Western Region be set at an annual rate of \$60,000 and that the pro rata share for each State be designated by the Recording Secretary after the final signature has been set. Passed.

Bohmont - The cooperative agreement should spell out the fact that funds budgeted for this position will be carry-over funds, and that any unexpended balance would remain available for the furtherance of this position.

In response to Bohmont's request for recommendation from WD for guidance of the Executive Committee regarding salary, it was the consensus of the group to let the Executive Committee decide the salary for the man selected.

#### ESCOPE

Frevert - ESCOP deferred action on Western Directors' resolution regarding WHEAL until each of the regional associations of Directors has had an opportunity to act on the subject. (See WD Minutes of March 1966, pp. 13-14.)

ESCOP discussed positions of Regional Research Director in which they are much interested.

ESCOP discussed retirement privileges of Experiment Station people if they pay in what they owe to Federal retirement.

ESCOP raised question as to whether or not they should be represented at regional meetings of National Food and Fiber Commission (NFFC).

Bohmont - Presumably each State Director will take the responsibility of representing WD and ESCOP, or of seeking representation of a Director from another State if he is more qualified, if such a meeting of NFFC is held in their State.

Ensign - The North Central Region Seed Practices Committee (NCR S-1) met in Chicago on April 6 and 7, 1966 and reviewed the proposed revision of "A Statement of Responsibilities and Policies Relating to Seeds and Other Propagation Materials of Field Crops."

#### ESCOPE, LRPC

Frevert - The July 6, 1966 edition of the Long Range Planning Committee (LRPC) report was discussed. (LRPC was referred to as LRTPFC in the March 1966 Minutes of WD.) One of the most significant portions of the report is the section that is an inventory of the present status of agriculture. An important question was: How can the overall

USDA-SAES agricultural research complex be adjusted to strengthen its research capability today and in the years ahead? Eleven steps were recommended, namely:

1. Establish a permanent position of Assistant Secretary for Science and Education in the U.S.D.A.
2. Place greater emphasis on program planning, coordination and evaluation of research.
3. Develop a procedure for effective State Experiment Station participation in the preliminary stages of the budget-making process for Federally appropriated funds for research.
4. Continue the research inventory on an annual basis as a joint SAES-USDA activity.
5. USDA enunciate and pursue a policy of broadening application of grant and contract programs.
6. Increase concentration and specialization of certain locations.
7. Develop more effective extension of research results by making it a standard practice, to the extent practicable, for extension workers to work with research counterparts as a collaborator or advisor on research projects in his field of responsibility.
8. Joint planning of major regional or national laboratories by USDA-SAES administrators.
9. Organize program advisory committees to serve both State and USDA in counseling on research program orientation.
10. Establish guidelines to govern the relative size of Federal and State appropriations.
11. Establish systematic procedures by which researchable problems important to effective conduct of Department action programs are considered and acted upon.

Frevert - The eight program area categories of the LRPC report were discussed. Development of package area research proposals is something the Agricultural Research Planning Committee might be in a better position to do than was LRPC.

Byerly - Cooperation of the LRPC is desirable in the identification of problems and in the determination of what it would take to feasibly accomplish the solution of those problems. Privileged information regarding the USDA budget should pass only to those under the administrative control of the Secretary of Agriculture. Otherwise, those not under such control who would have access to such privy information would be sworn to secrecy and thus could do or say nothing about it.

Thorne - Western Directors might explore further the establishment of a pooled regional resource center to facilitate exploration of arid land area research problems as related to their foreign arid land area efforts. The piecemeal approach of foreign arid land area research is not very efficient.

Further discussion of this subject brought out the following points:

1. This suggestion needs considered judgment lest we end up no better off due to diseconomies from over-investment of resources in one area at expense of others than we were in relatively ineffective piecemeal efforts.
2. Extension and other groups might be included in the development of a cooperative, more effective approach to researchable problems in areas such as foreign arid land area studies and assistance.
3. There is need for a pretty clear definition as to what these researchable problems are, and a determination of what resource people are available to do the research, so that resources can be pooled to more effectively tie up a package for foreign assistance in arid land area agriculture.

Byerly - CSRS will put up \$5,000 if Western Directors will have their States put up the other half - to bring the total to \$10,000 - to get such a cooperative group together to develop a proposal for arid land area agricultural research. CSRS could be helpful in getting people from outside the region to such a meeting.

Bohmont appointed a committee consisting of Thorne, Chairman; Sherman, and Hilston, to write up a proposed motion in the area of arid area research in response to Byerly's offer.

Later, Sherman presented the following recommendation of the committee:

We move that the Western Association of Agricultural Experiment Station Directors seek to sponsor, in cooperation with the Cooperative State Research Service of USDA, a symposium for the purpose of developing a coordinated assistance program for arid land agriculture in underdeveloped nations. The symposium would explore specific needs for technical assistance in research, extension, and teaching, and effective ways for meeting these needs through the cooperative efforts of colleges and universities of the United States specializing in arid land agriculture.

Thorne seconded the motion. Passed.

Bohmont noted that after National legislation that now affects this motion has been acted upon, it will be the responsibility of the Chairman of the Western Directors at that time to appoint the committee to work on this symposium.

Committee of  
Nine (C/9)

Asleson - The C/9 has held two meetings - in April and June - since the March meeting of Western Directors.

Some points from the Minutes of the C/9 Meetings of April 13-15, 1966 were discussed, namely:

1. The present PPBS is Government-wide and we will have to become a part of it.
2. In approaching our regional research programs, perhaps we should give more consideration to problems of national as well as to those of regional concern.
3. We should become mission-oriented so that we can relate our regional research to national missions.
4. We should be more concerned with improving our public relations in communicating to significant parties and the public at large a better impression of what we are doing.
5. Official annual reports of regional projects will be limited to three pages beginning with those in calendar year 1966. Additional materials may be attached if desired.

In preparing annual report emphasis should be placed on accomplishments. Administrative Advisers should stress this with their committees.



Publications listed in the Annual Report will be limited to those already published and should be categorized as: Regional (joint) publications, State Station publications, and journal articles. A list of approved manuscripts, theses and miscellaneous reports such as popular articles can be placed in the attachments to the official report, but should not be considered as part of the official publication listing. Popular articles can't be substituted for primary scientific reports - which are the professional reports of research - in the official annual report.

Hilston - There was some discussion that appropriate photos and a one-page summary of outstanding accomplishments of regional research should be prepared by the Administrative Adviser and forwarded each year in the Annual Report for each regional project.

Ensign suggested that some sort of publication to cover synopsis-type releases of new publications of Experiment Stations might be in good form.

Asleson - Some items from the Minutes of the C/9 Meetings of June 22-25, 1966 were emphasized, notably: Item No. 9 - it pertained to Contingency Fund Procedure; and Item No. 4 - the Tentative 1967 RRF Budget. C/9 is recommending, primarily on the basis of past requests, that the Contingency Fund be decreased to \$50,000 for the 1967 Budget.

Ely - The C/9, in seeking a basis for action at a later meeting has requested that the Regional Directors' Associations, CSRS, and others, consider and express their attitude toward the following six questions: (These questions are taken from the Minutes of the C/9 meetings of April 13-15, 1966.)

1. Should the Committee of Nine take the leadership in establishing ways to substantially reduce the number of funded projects? Answer - No.

Points brought out in discussion:

- a. It is not the responsibility of C/9 to tell WD, or any other regions, which projects to reduce. C/9 should however, give guidance by establishing policy. The concept of too many regional research projects is an opinion, not a policy statement.
- b. Can we have a reduction in the number of States participating in some projects as well as reducing the number of funded projects?

- c. In most instances, more outside funds than regional funds are put into regional research projects. (Generally, allocation of funding is 1/3 RRF, 1/3 Hatch, and 1/3 State.)
  - d. Regional technical committees facilitate planning and coordination of research programs in addition to exchange of ideas and information.
2. Would it help to distinguish between projects which should be approached on a regional basis and those which would simply benefit from coordination? Answer - This is now possible.
3. Would there be merit in excluding from RRF support "project centered" research, if a mechanism could be provided to implement coordination of such research? Answer - Yes.

Points brought out in discussion:

- a. There is the possibility of distinguishing between projects that are regional project centered and those that are contributing project centered but that are coordinated regionally. If the latter type projects are not regionally oriented, then we need some mechanism whereby we can coordinate them on a regional basis.
- b. We might benefit if there is a more formal approach structured and stated so as to handle intermittent needs to get together to discuss regional research.
- c. We already have considerable flexibility in funding if we examine the possibilities.
- d. It should be more clearly defined as to how States in different regions could get together readily to initiate a project without going through the regional process. (NOTE: There is a CRF project now that by-passed regional directors and went direct to C/9. It is set up on a contingency fund basis for one year, after which it should go through the regional process.)
- e. Why can't the definition of regional research be broadened to include those projects that are contributing project centered and need regional coordination?

4. Should the administrative advisers be called upon to recommend as to the need for the regional approach versus coordination for current projects and for new projects as they are proposed?  
Answer - This is now possible.

Point of discussion brought out in response to questions 2 and 4 was that Western Directors prefer broadening the definition for regional research on a formal basis.

5. Is a formal project statement essential for a project identified as needing coordination?  
Answer - No.

Point of discussion - We now have what are called administrative projects, so it is now possible to do what is described under question 5.

6. Should the Committee of Nine assume a more aggressive role in identifying areas for regional research? Answer - No.

Point of discussion - Each region should be more aggressive in presenting proposed areas for regional research to C/9.

Marketing  
Committee

Alexander indicated no meetings of this committee have been held, and he had nothing to report.

WAERC

Buchanan - WAERC has not met since the March meeting of Western Directors, but their next meeting is scheduled for August 17-19, 1966 at Los Angeles. He had nothing more to report.

After some discussion, the Directors indicated a preference to have the symposium (with WAERC) next March begin Tuesday morning and extend to midway in the afternoon. This would facilitate travel arrangements, and still allow the remaining one-quarter of a day for a discussion of problems of common interest with Western Extension Directors.

WSSC

Buchanan distributed a memorandum, dated June 9, 1966, from W. L. Slocum, Chairman of WSSC. Comments of six committee members were also included.

WSWRC

Frevert indicated this committee has not met since the last meeting of Western Directors at Tucson. He had nothing more to report.

WHEAL

Bohmont relinquished the Chairmanship to Vice Chairman Hilston so that he could make his report on WHEAL.

Bohmont - The argument of WHEAL regarding a proposed meeting of Home Economics representatives with the Experiment Station Section of Land-Grant Colleges was presented and discussed. The present home economics group that meets at NASU&LGC involves some 463 departments in institutions throughout the U. S., while Land-Grant Colleges have only 53 departments. This overall group is a professional group involved largely with teaching problems, and they are not basically research oriented. Extension Directors approved of a meeting of home economists. Western Station Directors, however, have not acted as a group to decide whether or not as administrators we would want home economics administrators to meet at the Land-Grant Meetings.

Bohmont moved, Leyendecker seconded, that Western Directors recommend to ESCOP that home economics administrators of the Western Region be invited to participate in the Land-Grant College meetings at Washington, D. C., in November 1966, as a part of the Experiment Station Section, provided that: 1) They are recommended to the President of the Institution by their respective Experiment Station Director; and 2) that a special program of activities is arranged for the home economics representatives. REJECTED.

The following points were made during a subsequent discussion period:

1. If home economists are allowed to hold separate meetings we would in fact be encouraging development of another section. This would be contrary to desires to reduce the number of sections.
2. The case seems to be stronger to have representation at the LGC meetings than to have all 18 members of WHEAL invited.
3. WHEAL is an advisory group to WD just as are WAERC, WSSC, and WSWRC.
4. There would be some advantages in receiving direct information on research problems from Experiment Station Section meetings.
5. Home economics leaders argue that their research people differ from those in home economics teaching or extension.

Thorne then moved, Ensign seconded, to amend Bohmont's motion to read that Western Directors recommend to ESCOP that selected home economics administrators of the Western Region be invited as representatives to the 1966 Land-Grant College meetings at Washington, D. C., as a part of the Experiment Station Section, provided they are so recommended to the President of their institution by their Experiment Station Director. Passed.

REPORT OF THE COMMITTEE ON REGIONAL RESEARCH  
to  
The Western Directors  
Corvallis, Oregon  
July 19, 1966

Chairman Leyendecker called the RRC meeting to order at 10:20 a.m., July 18, 1966. Those in attendance were:

P. J. Leyendecker, Chairman  
K. W. Hill  
E. G. Linsley (alternate)  
N. F. Farris  
L. R. Gray, Recording Secretary

A. REQUESTS FOR EXTENSION

1. WM-38, Financial Management of Agricultural Co-operatives.

RRC recommends the extension of WM-38 for one year, to June 30, 1967.

/Leyendecker moved, Hill seconded, that this recommendation be accepted. Passed./

2. IR-4, Clearance of Pesticides for Use on Minor Agricultural Crops.

RRC recommends that the Western Directors go on record as approving extension of IR-4 for another three years, to June 30, 1970.

/Leyendecker moved, Hill seconded, that this recommendation be accepted. Passed./

B. RECOMMENDATIONS FOR NEW AND REVISED REGIONAL PROJECTS

1. W-58 Revised - "Seed and Forage Plant Characteristics Related to Temperature During Seed Development and Maturation."

RRC recommends the approval of the proposed revision of W-58 for five years, that it retain the same number and that R. D. Ensign remain as Administrative Adviser. RRC suggests that Ensign encourage additional participation from Stations within and outside the Region.

RRC compliments the W-58 Technical Committee for its past research accomplishments, especially for the preparation of two regional publications, and encourages the committee to complete the current publications that are in the process of preparation.

2. WM-58, "Socio-Economic Values of Big Game Resources and Related Management in the Western States."

RRC recommends that this research proposal be re-submitted as a non-marketing project, and assigns the number W-97, with R. M. Alexander as the Administrative Adviser.

(W-97 was voided as a result of disapproval of the project previously submitted under this number, namely: "Alfalfa Seed Insects in Relation to Plant Resistance").

/Leyendecker moved, Linsley seconded, that this recommendation be accepted. Passed./

3. W- , "Evaluation and Modification of Machinery and Systems to Improve Soil Environment for Cotton Growing."

RRC recommends approval of the continuation of this important area of regional research. RRC believes the research objectives to be sufficiently different to require the assignment of a new number, W-99. In the preparation of the project outline, it is suggested that the Administrative Adviser give special attention to the incorporation of each Station's research contribution into a coordinated regional research effort. Presently the proposed State programs are strong, meaningful research efforts which do not fully meet the regional research objectives. RRC recommends that Kelly continue as Administrative Adviser.

/Leyendecker moved, Sherman seconded, adoption of this recommendation. Passed./

4. W- , "Reproductive Diseases of Livestock."

RRC recommends approval of this area of research and assigns No. W-100, and that Pritchard continue as the Administrative Adviser. The proposal presents a number of very broad objectives which should be narrowed in scope and directed to the specific areas that clearly can best be solved by a regional coordinated approach to the research problem. RRC recommends that the Chairman of the W-95 Technical Committee be invited to participate in the development phases of the new project. RRC further recommends that the technical committee consider the preparation of the regional publication covering the research results of W-27.

Leyendecker moved, M. L. Wilson seconded, adoption of these recommendations. Passed.

**C. REVIEW OF COMMITTEE OF NINE COMMENTS ON WESTERN REGIONAL PROJECTS**

**1. WM-38, "Financial Management of Agricultural Cooperatives."**

RRC calls attention to the C/9 recommendation that: "the duration of WM-38 should be extended for another year (to 6/30/67) with the thought that the technical committee should move ahead with publications as rapidly as possible and further organize WM-56." RRC recommendation appears under Requests for Extension.

**2. WM-56, "Economic Guidelines for Merging, Dissolving, or Making Related Adjustments in Agricultural Cooperatives."**

RRC calls attention to the C/9 recommendation that: "the project be returned to the Administrative Adviser for development of procedures and for coordination that will exist between the States having responsibility for various objectives."

**D. REGIONAL RESEARCH PROJECT CLASSIFICATION**

RRC reviewed the project classifications by administrative advisers and representatives of the CSRS and calls them to the attention of Western Directors for further consideration, discussion, and any other action deemed necessary. See APPENDIX, pp. 30-31.

(NOTE: The regional project classifications listed under CSRS were rated by Beacher and Farris, but they should not be considered as an official CSRS rating.)

**E. POLICY STATEMENT ON ADVISORY COMMITTEES**

RRC submits the following policy statement regarding regional research advisory committees:

"The Regional Research Committee has been charged with the responsibility of making recommendations to the Western Directors as to the continuation, revision, or termination of regional projects. In addition, RRC has the responsibility of recommending to the Western Directors the disposition of all new and revised regional projects, including their evaluation as to appropriateness, regional significance, and adequacy of procedures and participation.

"The Western Directors also look to RRC for the evaluation of regional research programs, new research problems especially adapted to the regional research approach, and procedures which will increase the efficiency and effectiveness of the regional research program in the twelve Western States.

"The Committee realizes full well that to accomplish these tasks, the RRC must rely upon the assistance of other administrators and scientists associated with the regional research program. This can be done most effectively by the committee system. Presently the Western Directors have four such committees that have been organized, at different times, since the establishment of the Regional Research Program in 1946. These four committees are: 1) WAERC; 2) WSWRC; 3) WSSC; and 4) WHEAL. The exact relationships, responsibilities, and lines of authority of these committees require clarification.

"The following guidelines are submitted for consideration by the Western Directors:

1. Committees or councils will be appointed upon request of RRC by the Chairman of the Western Directors, following approval by the Western Directors. They will serve in an advisory capacity to the Regional Research Committee and through this committee to the Western Directors on possible, proposed or active regional research in their respective fields carried on in the Western Region. Committees and councils will also be concerned with the total research program and activities in their respective fields of interest in the Western Region.
2. Committees or councils will normally be made up of department heads.
3. Meetings will normally be held once a year or upon call of the Chairman of the Regional Research Committee, with the approval of the Chairman of the Western Directors.
4. Chairmen of Regional Research Advisory Committees or Councils will be invited to meet individually with the Regional Research Committee once a year, or upon request. Chairman of RRC will coordinate this requirement.
5. Present Regional Research Advisory Committee and councils will be continued.



6. Present Regional Research Advisory Committee and councils will reconstitute their membership and orientation to conform with these guidelines. Directors will take the responsibility to see that this change is carried out as far as their station representatives are concerned.
7. An administrative adviser to each committee or council will be appointed by the Western Directors.
8. The responsibilities of the committees or councils will be to:
  - a. Review and make recommendations on regional research project proposals referred to it by the Regional Research Committee.
  - b. Submit periodically to the RRC suggested areas which are especially suitable for regional research.
  - c. Recommend to the Regional Research Committee new or revised administrative procedures which will stimulate and promote a productive Western Regional Research Program."

Leyendecker moved, Hill seconded, for adoption of this policy statement by Western Directors. Passed.

F. GENERAL COMMENTS

1. RRC calls the administrative advisers' attention to the termination date of 6/30/67 of the following projects: W-38, W-41, W-48, W-80, WM-33, WM-35 (note C/9 comments), WM-49, WM-50 and WM-54. RRC suggests that appropriate action be taken to revise or close out these projects.
2. The attention of all administrative advisers is invited to APPENDIX A, covering a format for technical committee minutes, and APPENDIX B, the role of the administrative adviser, in the minutes of the Committee of Nine meetings of April 13-15, 1966. RRC further suggests that administrative advisers review the Western Directors' action taken at the November 1964 meeting which was again restated in the November 1965 Western Directors' Minutes, Page 10, regarding the project review and approval procedures which are now in effect.

Nominations for  
1966 Elections

The report of the Nominating Committee for the 1966 elections is as follows:

Chairman, WD, 1 yr.	- J. A. Asleson
Vice Chairman, WD, 1 yr.	- D. W. Bohmont
Secretary, WD, 1 yr.	- E. G. Linsley
RRC, 1 yr.	- K. W. Hill
RRC, 2 yrs.	- C. P. Wilson
RRC, 3 yrs.	- E. G. Linsley
RRC Alternate, 1 yr.	- L. C. Ayres
C/9, 2 yrs.	- R. E. Ely*
C/9, 3 yrs.	- P. J. Leyendecker
ESCOPE, 1 yr.	- R. K. Frevert*
ESCOPE, 2 yrs.	- R. D. Ensign*
ESCOPE, 3 yrs.	- C. F. Kelly
ESCOPE, Leg. Subcom., 1 yr.	- R. K. Frevert*
ESCOPE, Leg. Subcom., 3 yrs.	- R. D. Ensign
Marketing Committee	- R. M. Alexander

Those continuing in office in terms specified from a previous election are indicated by an asterisk (\*) behind their names.

Leyendecker moved for acceptance of the Nominating Committee's ballot report; Hilston seconded. No action taken.

Buchanan then moved, Frevert seconded, for unanimous approval of the ballot cast by the Nominating Committee. Passed.

Director Emeritus  
Plaque to Besse

Bohmont presented Dr. R. S. Besse his plaque honoring him as a Director Emeritus of the Western Directors' Association. In his response, Dr. Besse indicated that research problems are as great today as they were 20 years ago, but research expenditures are much greater today.

W-1

Dr. Ralph Bogart - Several questions have been raised as to whether or not W-1, "The Improvement of Beef Cattle through the Application of Breeding Methods," should be continued. Funds for this project haven't been increased since 1949.

A series of State bulletins is being prepared, but what is needed is some coordination. The W-1 Technical Committee feels there is a need for continued coordination.

W-48

Asleson - The W-48 Technical Committee on "Association of Climatic Elements with Crop Production and Plant Development," requested the WD to consider their proposal to publish their report on Phenology, and split the costs among the States for 5,000 copies.

Bohmont - There is already a Western Directors' policy regarding such a procedure (WD Minutes of November 1963, pp. 5-6). The consensus of the Directors was to go along with the existing policy that Stations order according to their needs.

IR-3

There was no report due to the absence of C. P. Wilson.

Farris - C/9 recommended that IR-3 be closed. Any funds needed for a one-year continuance could come from contingency funds or from the Directors' Travel Fund, but not from Regional Research Funds.

The C/9 intends to support the Seminar on National Agricultural Policy Research from the Committee's Travel Fund.

IR-4

Hill - IR-4 is entitled "Clearance of Pesticides for Use on Minor Agricultural Crops." All of the Experiment Stations in the United States are cooperating in this committee, which was organized in 1963. It was set up for research on obtaining clearance for the use of various pesticides on minor crops in which commercial concerns exhibited no interest. Dr. V. H. Freed of Oregon is the Western Regional representative on the committee, and there is a State liaison man in each State.

IR-4 is funded by a \$40,000 off-the-top allocation of RRF. The project is scheduled to terminate 6/30/67. The committee of administrative advisers from the four regions are unanimously agreed that this project ought to be continued, and that no revision of the outline is necessary.

Swine Industry Study Meeting

Kelly - A swine industry study committee met in Chicago on May 27, 1966 pursuant to action by the Committee of Nine. The purpose of the meeting was to make an overall appraisal of recent trends and present status of swine production, marketing, processing and utilization, and to identify major problems and research needed to assure that swine production will maintain a strong competitive position in our agricultural economy. Efforts were devoted largely to defining the problems and planning approaches to their solutions. The group agreed that there should be an increase in an interdisciplinary research approach to swine industry problems. However, no one mentioned how the approach to this problem package would be financed.

Byerly - The committee had a task of determining whether or not there is a need to develop and evaluate alternate systems of least cost production of high quality pork. In a Department-wide package proposal such as this, there would be funds. One possible source of funding would be "Grants," with CSRS, ARS, ERS, and other agencies as possible grantors.

If the package proposal can't be accomplished via regional research, then several alternate routes should be considered, such as:

1. A single interdisciplinary project.
2. A group of relevant single discipline projects.
3. Concentration at a single institution.
4. Cooperation among several institutions.
5. Recommendation that industry, rather than USDA-SAES research personnel and facilities, be used.

Kelly - A subcommittee was appointed to develop a swine industry package that would include a priority list of researchable questions, and other recommendations for consideration by research administrators. George Browning was designated as Chairman of this subcommittee, which is scheduled to meet in Chicago in August. This group will answer to the Secretary of Agriculture.

Byerly - A package effort is planned for the beef and dairy industries, but it is questionable whether or not a package effort will be forthcoming for the sheep industry.

National Coordinating Committee  
for New Crops  
(NCCNC)

M. L. Wilson - The "Recommendations Subcommittee on National Repository for Asexually Propagated Plant Materials" made the following summary recommendations in their Committee Report of October 1965:

1. A basic amount of plant material of asexually propagated crops, particularly of tree fruits, nuts, small fruits, and vine crops, including certain breeding materials, should be maintained on a priority basis.
2. We believe that asexually propagated drug, fiber, flavoring, and vegetable crops should be maintained on a priority basis also, but that they are more adequately cared for by plant breeders than are collections of fruit materials. Therefore, these crops should have a somewhat lower maintenance priority than fruits.
3. We believe also that asexually propagated ornamental species should have a lower maintenance priority than fruits because they are presently maintained by institutions devoted to building plant collections such as the various arboreta, botanical gardens, commercial nurseries, and parks of the Country.

During the discussion, Ensign pointed out that we already have a system for some plant introduction stations, and some interregional programs such as IR-1 and IR-2. Wilson indicated the NCCNC was aware of these points, but it wants the support of various regional directors to ARS to get such a system started for tree fruits and other asexually propagated plants.

Ayres expressed concern lest we lose what supplies of such plant breeding stock that are available at some stations if such a national system is forthcoming.

Wilson moved, Buchanan seconded, that the following resolution for the establishment of a national repository for asexually propagated plant materials be adopted by the Western Directors:

WHEREAS, there is great need in the agricultural research program of the United States for repositories of basic material which would be valuable to the State experiment stations and Federal agencies to use in connection with their agricultural research programs; and

WHEREAS, the need of repositories for plant germ plasm has been recognized by the establishment of a national seed storage facility; and

WHEREAS, this facility makes no provision for the maintenance and preservation of vegetatively propagated plant materials;

NOW, THEREFORE, BE IT RESOLVED that the Association of Western Agricultural Experiment Station Directors recommend to the Administrator of the Agricultural Research Service that a Federally administered program be established to maintain and preserve valuable germ plasm of asexually propagated crops, particularly of tree fruits, nuts, small fruits, and vine crops, including certain breeding materials.

The motion passed unanimously.

Joint USDA-SAES  
Planning for  
Cotton Research

Frevert - Minutes of the June 18, 1966 joint meeting of Western Directors and USDA Administrators regarding "Plans for ARS Research on Cotton Insects and Cotton Physiology at New Laboratory at Phoenix" were discussed. The following motion was passed at that meeting:

"That the A.R.S. approach the Chairman of the Western Association of Experiment Station Directors with the recommendation that the Directors of the States affected

appoint representatives to meet with duly selected A.R.S. representatives to serve as a planning and advisory committee to review the nature and scope of the research proposed to be conducted at the new A.R.S. Laboratory at Phoenix, Arizona."

Bohmont - ARS can be expected to follow through and request WD to appoint representatives to meet with them in accord with the above motion.

Indirect Costs  
and Related  
Matters

Buchanan - These items were discussed at considerable length. Viewpoints of each institution were presented. There were differences of opinion as to what should be the appropriate position of the Western Directors. No action was taken.

Collaborators'  
Conference  
1967

The Western Utilization Research and Development Division of ARS, at Albany, California, (WURDD) suggested the Western Directors consider one of the following three topics for the 1967 Collaborators' Conference:

1. Protein-rich Products for Aid and Trade.
2. Removal of Water in the Processing of Foods.
3. Improved Fabrics from Natural Fibers.

The Directors voted, and their first choice was No. 1, Protein-rich Products for Aid and Trade.

Bohmont requested that Kelly notify Dr. Stitt at WURDD of the Directors' preference for topic No. 1, arrange with them a suitable date and appoint a member of his staff to be available to participate with the Laboratory personnel in developing the program for the Conference.

Future WD  
Meetings

The fall meetings will be at the Shoreham Hotel, Washington, D. C. on November 13-16, 1966.

The spring meetings will be held in the Regents Room at the University of California, Berkeley, California, March 7-9, 1967.

Washington-Idaho will host the WD meetings in the summer of 1967.

New Mexico will be host to WD for the spring meetings in 1968.

Hilston extended an invitation to WD to meet in Wyoming in the summer of 1968 - Western Directors accepted.

Hawaii will host the meetings in the spring of 1969.

## Resolutions

### Resolution No. 1

WHEREAS, Dr. Nolan F. Farris is retiring from the Cooperative State Research Service, and this will probably be the last meeting of the Western Agricultural Experiment Station Directors that he will be attending; and

WHEREAS, Dr. Farris has served as CSRS representative with the Western Directors, Assistant Administrator of CSRS (with responsibilities as coordinator for Regional Research and non-Formula Funds Programs), and as Secretary of the Committee of Nine for many years; and

WHEREAS, Dr. Farris has played a major role in the development of Regional Research with his many contributions to program development and its administration;

THEREFORE, BE IT RESOLVED, that the Western Association of Agricultural Experiment Station Directors extend to Dr. Farris a grateful expression of appreciation and our best wishes, and that he and Mrs. Farris will have a well-earned vacation and retirement.

### Resolution No. 2

WHEREAS, the Western Association of Agricultural Experiment Station Directors, including CSRS representatives and guests have enjoyed and appreciated the refreshments served during our meetings of July 19-21, 1966; and

WHEREAS, we have appreciated the opportunity to visit the Department of Food Science and Technology, and to sample products of their research;

THEREFORE, BE IT RESOLVED, that this group wishes to express its appreciation to Dr. Harold W. Schultz, Head of the Department and Mrs. Lois A. Sather, a member of the Department's Staff, for the preparation and provision of refreshments and their efforts to contribute to our enjoyment of our meetings at Oregon State University.

### Resolution No. 3

WHEREAS, the Western Association of Agricultural Experiment Station Directors, including CSRS representatives and guests have completed a very successful and enjoyable summer meeting; and


WHEREAS, the Directors' stay at both Corvallis and Newport has been most enjoyable;

THEREFORE, BE IT RESOLVED, that the Western Association of Experiment Station Directors, the CSRS representatives and guests, at their meetings of July 19-21, 1966, express their sincere appreciation to the staff of Oregon State University. Special votes of thanks are extended to: Dr. J. H. Jensen, President of Oregon State University; Dean W. T. Cooney of the School of Agriculture; Dr. G. B. Wood, Station Director; and Dr. R. W. Henderson, Mr. R. M. Alexander, and Dr. W. H. Foote, Assistant Directors, for their special efforts to provide for the means and facilities for both a successful meeting and for the family enjoyment of those attending the meeting.

Adjournment

Chairman Bohmont adjourned the meeting at 12:20 p.m. on July 21, 1966.

Respectfully submitted,



Leo R. Gray  
Recording Secretary



APPENDIX

REGIONAL PROJECT RATING  
WESTERN REGION

Project: No. :	Title	Rating	
		Adm. Adv. :	CSRS*
WM-26 :			
(55) :	Consumer purchases of fruits and vegetables	A I	B IV
WM-33 :	Beef quality and marketability	B IV	B IV
WM-35 :	Seed marketing	A II	B V
WM-38 :	Cooperative marketing	B V	B V
WM-44 :	Promotion and utilization	A II	B V
WM-46 :	Milk marketing	A II	B V
WM-47 :	Horticultural food crops	B V	B V
WM-48 :	Livestock marketing efficiency		A II
WM-49 :	Prices of western cotton	B IV	B V
WM-50 :	Lumber and plywood marketing	A II	A I
WM-51 :	Sugar marketing	A I	B IV
WM-52 :	Insect control and grain marketability	A II	B V
WM-53 :	Advertising and pricing practices of food retailers	A II	A II
WM-54 :	Hay and feed grain markets	A II	A II
W- 1 :	Beef cattle breeding	B IV	B IV
W- 6 :	Plant introduction	A II	A III
W-24 :	Cotton mechanization	A II	B V
W-25 :	Improvement of range lands	B V	B V
W-27 :	Vibrionic abortion in sheep	A II	B IV
W-34 :	Range livestock nutrition	A II	B IV
W-35 :	Parasites of ruminants	B IV	B V
W-37 :	Grasshopper population changes	A II	B V
W-38 :	Fungus-induced root diseases	B IV	B V
W-40 :	Breeding forage plants	A II	B IV
W-41 :	Urinary calculi of cattle and sheep	A II	B V
W-44 :	Lipid metabolism	B IV	B V
W-45 :	Pesticide residues	B IV	B IV
W-46 :	Stresses in cattle and sheep production	A II	B V
W-48 :	Weather environment	A I	A II
W-49 :	Breeding failure in cattle	B IV	B V
W-50 :	Stresses and performance of laying hens	B IV	A I
W-51 :	Drainage design	A II	B IV
W-52 :	Biochemistry of herbicidal action	B IV	B V
W-54 :	Adjusting farming to prospective markets	A II	A II
W-56 :	Nematodes and root diseases	B IV	B IV
W-57 :	Amino acid utilization	A II	B IV
W-58 :	Forage crop production	A I	A II
W-61 :	Sheep breeding	A II	B IV
W-64 :	Deciduous fruit tree viruses	A II	B V

\* Rated by Beacher and Farris - not an official CSRS rating.

Project:		Rating	
No. :	Title	Adm. Adv. :	CSRS*
W-65	: Efficiency of irrigation application	: A II	: B IV
W-66	: Structural stability of soils	: B IV	: B IV
W-67	: Soil-plant-water relationships	: B IV	: B IV
W-68	: Soil water movement	:	: B IV
W-71	: Forest tree seedling establishment	: B IV	: B IV
W-74	: Seed chalcids	: A II	: B V
W-77	: Response of Canada thistle to herbicides	: B IV	: B V
W-78	: Turkey eggs hatchability	: A II	: A I
W-79	: Economics of western livestock ranches	: A II	: A II
W-80	: Textile laundering	: A II	: A II
W-81	: Economics of water transfer	: A II	: B IV
W-82	: Water quality	: B IV	: B IV
W-83	: Fusarium root rot resistance in beans	: B IV	: B IV
W-84	: Biological control of insects	: B IV	: B V
W-85	: Nitrogen utilization	:	: B IV
W-86	: Fruit tree hardiness	: B IV	: B V
W-87	: Clay mineral species	:	: B IV
W-88	: Enteric disease of neonatal calves	: A II	: B V