

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

OFFICE OF THE
RECORDING SECRETARY

August 14, 1964

TO : Western Directors
FROM : John O. Gerald, Recording Secretary
SUBJECT: Minutes of July 21-23, 1964 Meeting

Enclosed are Minutes of your recent meeting. Items below are enumerated for your specific attention. In addition, all of you may be interested to review discussions on "Facilities Needs and Research Concentration," pages 20-23.

<u>For Specific Attention of</u>	<u>Page No.</u>	<u>Sidehead or Other Identification</u>
All Directors	4	"Review Schedule," request for suggested changes in schedule and for subject matter reviews.
	15	RRC Report, Item B, WM- , Non-economic Marketing Areas.
	18	RRC Report, Item F, and attached tabulation of adviser assignments for 1964-65.
	18	RRC Report, Item G.
	24	Advisory Committees to Western Directors, motion re <u>Ad Hoc</u> Committees.
	26 - 27	March 1965 Meeting, Place and Date of
All Administrative Advisers	11	Committee of Nine, channel for resubmitting outlines returned by the Committee of Nine.
	18	RRC Report, Item E, motion re "regional publications."
	25	Examples of Results of Regional Research, motion re.
RRC	17 - 18	RRC Report, Item E, discussion and assignment for next meeting.
Alexander	15 - 16	RRC Report, Item C, Extension of WM-38.

<u>For Specific Attention of</u>	<u>Page No.</u>	<u>Sidehead or Other Identification</u>
Asleson	16 - 17	RRC Report, Item D.
Bohmont	9	HERAG, motion instructing HERAG to draw up a two-page proposal on foods.
	9 - 10	HERAG, adoption of ten-point statement of procedures on project development, and the statement.
Boyce	5	ESCOP, authorization for W-45 technical committee to invite representatives of chemical industry and regulatory agencies to meetings.
Buchanan	14 - 15	RRC Report, Item B, WM- , (WM-40).
	19 - 20	Policies for Reimbursement of Travel Expenses from Special Travel Fund.
Ensign	13 - 14	RRC Report, Item B, W- , Calf Scours.
Frevort	9 - 10	HERAG, adoption of ten-point statement of procedures on project development, and the statement.
	12 - 13	RRC Report, Item B, W-31, Soil Nitrogen.
	14	RRC Report, Item B, W- or WM- , Fruit Weight Reduction.
Hill	13	RRC Report, Item B, W- , Rest and Dormancy.
Huffman	8	WAERC, request to circulate justification for proposed Hawaii meeting in advance of November meeting.
	9 - 10	HERAG, adoption of ten-point statement of procedures on project development, and the statement.
	14	RRC Report, Item B, WM- , Livestock Feed Pricing.
	19 - 20	Policies for Reimbursement of Travel Expenses from Special Travel Fund.
Kelly	20	1965 Collaborators' Conference at WURDD, appointment and authorization.

<u>For Specific Attention of</u>	<u>Page No.</u>	<u>Sidehead or Other Identification</u>
Pritchard	13 - 14	RRC Report, Item B, W- , Calf Scours.
Rasmussen	16 - 17	RRC Report, Item D.
Ronningen	5	"Regional Research," request that purpose of checks sent to Stations by USDA Agencies be identified.
Thorne	9 - 10	HERAG, adoption of ten-point statement of procedures on project development, and the statement.
	24 - 25	Advisory Committees to Western Directors, authorization to proceed on Social Science Committee.
Wheeler	19 - 20	Policies for Reimbursement of Travel Expenses from Special Travel Fund.

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MINUTES OF
WESTERN DIRECTORS' MEETING

204 Forestry Building
Utah State University
Logan, Utah
July 21, 1964

The meeting was called to order at 8:35 a.m. by Vice-Chairman Frevert. The following were present during all or part of the meeting:

R. K. Frevert	Arizona
H. E. Myers	Arizona
S. H. Cameron	California
C. F. Kelly	California
E. G. Linsley	California
D. F. Hervey	Colorado
S. S. Wheeler	Colorado
G. D. Sherman	Hawaii
G. Stanford	Hawaii
R. D. Ensign	Idaho
J. E. Kraus	Idaho
J. A. Asleson	Montana
R. E. Huffman	Montana
D. W. Bohmont	Nevada
R. E. Ely	Nevada
P. J. Leyendecker	New Mexico
M. L. Wilson	New Mexico
R. W. Henderson	Oregon
F. E. Price	Oregon
D. A. Burgoyne	Utah
K. W. Hill	Utah
D. W. Thorne	Utah
M. T. Buchanan	Washington
L. W. Rasmussen	Washington
N. W. Hilston	Wyoming
N. F. Farris	CSRS
J. O. Grandstaff	CSRS
T. S. Ronningen	CSRS
E. C. Elting	USDA
V. L. Harper	FS
F. Stitt	ARS
F. W. Luikart	Brookings Institution
R. B. Cattell	University of Illinois
V. K. Heyman	Department of Defense
M. R. Merrill	Utah
V. R. Smith	Utah
J. W. Floyd	Utah
C. W. Cook	Utah
J. O. Gerald	Recording Secretary

Introductions

Sherman introduced Dr. George Stanford, formerly with Sugar Research Institute, Honolulu, Hawaii, who will become Professor of Soil Science and Acting Associate Director of the Hawaii Station on August 15, 1964. He also relayed the greetings of M. M. Rosenberg, formerly Dean and Director, now Director of International Programs for the University.

Thorne introduced Dr. Milton R. Merrill, Vice President, Utah State University; also Vearl R. Smith, Dean, College of Agriculture, J. Whitney Floyd, Dean, College of Forestry, and C. Wayne Cook, Assistant Dean, College of Forestry, all of Utah State University.

At a later session, Buchanan introduced Dr. E. C. Elting, Assistant to Director for Science and Education, USDA; Dr. V. L. Harper, Deputy Chief for Forestry Research, Forest Service; Dr. Joseph F. Pechannec, Director, Intermountain Forest and Range Experiment Station, Ogden, Utah; Dr. F. Stitt, Western Utilization Research and Development Division, Albany, California; Dr. F. W. Luikart, The Brookings Institution, Washington, D. C.; Dr. R. B. Cattell, Professor of Psychology, University of Illinois; and Dr. V. K. Heyman, Systems Analyst, Department of Defense, Washington, D. C.

Welcome

The Academic Vice-President of Utah State University, Dr. M. R. Merrill, welcomed the group to the campus. He expressed the regrets of President Daryl Chase in not being able to attend. He complimented Directors on Station administration; particularly on their ability to integrate research conducted with Federal, State, and private funds into one total package of results. Dr. Merrill gave information concerning the building program at Utah State University and invited Directors to visit various buildings and facilities while on campus. He assured the group it would be welcome as often as it desired to come back in the future.

Approval of March 1964 Minutes

Wheeler moved, Price seconded, that Minutes of the March 1964 meeting be approved as distributed. Passed.

Comments of CSRS Representative

Ronningen discussed status of legislation of interest to Experiment Station Directors. The Harch Act appropriation, as passed by the House, included \$40,863,000 for grants to States. This represents a \$1.5 million increase over the previous fiscal year. The current Appropriations Bill included no 204(b) funds. The \$1,000,000 level for McIntire-Stennis is continued in the Appropriations Bill.

Ronningen mentioned a proposed amendment to the Appropriations Bill. This proposed amendment would add \$3 million to the Hatch Act appropriation; \$550,000 to the McIntire-Stennis appropriation; \$2 million for basic research; and \$3,242,000 for facilities. He pointed out that these increases in funds under the proposed amendment would be earmarked specifically for a stepped-up program of research in the field of pest control.

Ronningen discussed the possibility that CCC funds, under Section 32 of P.L. 320, will be made available again in the current fiscal year for basic research on decreasing cost of production of specified crops and that an additional \$3 million might be made available for basic research on expanded use of crops which are in surplus.

He also mentioned that there is authority under a different appropriation for the allocation of funds to reduce costs of production for cotton.

Ronningen reported that Senate Hearings on the Appropriations Bill were held on March 17 and CSRS testified in support of the President's Bill. On July 9, the President submitted an amendment providing for increased emphasis on pest control. Interested agencies of the Department were invited to testify in support of this amendment.

Ronningen reported that the S-2, Water Resources Bill, was signed into law by the President on July 17. This Act provides authorization for Water Research Institutes at Land-Grant Colleges and a grant program for water research outside of the Water Institutes. Three sources of funds are provided for in the Act.

1. Up to \$100,000 annually to establish and carry on the work of each of the Water Resources Research Institutes.
2. Up to \$5 million matching funds annually to Institutes for research projects.
3. One million dollars annually for ten years for grants and contracts to authorize groups other than Water Resources Research Institutes.

He mentioned that an interesting and unusual feature of the Act is that grants for research under Title II; i.e., outside the Water Research Institutes; can be made only after the proposals have been submitted to the Interior and Insular Affairs Committees of the House and Senate. Such proposals may be disapproved by these committees within a 60-day period.

Ronningen reported that the Ribicoff Subcommittee of the Senate Committee on Government Operations has resumed hearings on the role of Government in pesticide use, regulation and research. The committee is particularly concerned that Federal agencies conduct regulatory proceedings in a manner that is fair to both the public and the industry.

Bill S-2114 provides for periodic Congressional review of Federal Grant-in-Aid programs to States and local Governments. It provides for automatic expiration of new grant-in-aid programs after five years unless Congress specifies an expiration date. The provisions of this Bill apply only to new programs. The

"Regional
Research"

Farris pointed out that RRF has now been changed to a quarterly certification basis. He noted that this may cause some difficulty, particularly with trust fund allotments, but reported that the quarterly basis cannot be altered for any allotments. He also reminded Directors that RRF can be carried over from one fiscal year to the next, the amount of the carryover being deducted from the first quarter certification in the succeeding year.

Farris mentioned the marketing quota on RRF. He noted that CSRS expects at least 20 percent of RRF at the regional level to be on marketing projects. However, a State can meet its quota with any combination of Hatch and RRF or by getting some other State to make up its shortage of marketing allotments.

Thorne and others asked that CSRS determine if it might be feasible for ARS and other Department agencies to identify the purpose of each check made to the Experiment Station. The problem of applying the funds to the intended purpose is complicated at times when the checks arrive without any indication of purpose for which sent.

Directors expressed appreciation to Ronningen, Grandstaff, and Farris for their discussions and asked them to relay a special note of thanks to Beacher for the Digest of Western Directors Minutes.

ESCOP

Price congratulated Ronningen for his excellent performance as Recording Secretary to ESCOP. He mentioned the April 30-May 1 meeting of ESCOP.

ESCOP considered the question of continuance of ESMRAC. This committee is not a subcommittee of ESCOP, but rather is an advisory committee of USDA concerning funding of projects from 204(b) funds and for other marketing matters. Elimination of 204(b) title from the 1965 Appropriations Bill caused question to arise concerning ESMRAC's future. ESCOP recommended to the Department that ESMRAC be continued as an advisory committee to CSRS on marketing research.

The Chemical Residue Subcommittee of ESCOP recommended that regional technical committees for projects concerned with chemical residues invite appropriate representatives of industry and Government, particularly regulatory bodies, such as Food and Drug Administration, to meet with technical committees. ESCOP took action to endorse the recommendation but left the details as to how the decision would be implemented for the regional associations or technical committees to work out.

Price moved, Leyendecker seconded, that Western Directors go on record as favoring the suggestion of the Chemical Residue Subcommittee and authorize the W-45, Pesticide Residue, technical committee to proceed as recommended. Passed.

Price mentioned activities of the Legislative Subcommittee in appropriations hearings and of upcoming hearings of the Budget Bureau on the 1966 fiscal year budget. He mentioned the problem of diverse projects and the commitment of increased funds to specific tasks by Stations.

ESMRAC

Price reported for Alexander who was absent. ESMRAC met June 3, 1964, and on June 4 the committee met jointly with the marketing advisory committees from the Federal Cooperative Extension Service in the State Departments of Agriculture. The written report by Alexander follows:

The major item considered by ESMRAC was the future function, if any, of this committee in light of the strong possibility that no 204(b) funds would be available for marketing research starting with this fiscal year. The following points were considered and action taken in this regard:

1. Dr. Byerly, in discussing this matter with the group, indicated that CSRS needs the services of a Marketing Research Advisory Committee from the Experiment Stations. This committee would have the responsibility of advising the Secretary of Agriculture, represented by CSRS, on administration of the Marketing Research Program being carried out at the Agricultural Experiment Stations. In his judgment the fact that the committee would no longer have the responsibility for recommending allocation of 204(b) funds should not diminish the need for such a committee. It was also pointed out that there is a continuing need for coordination of research with Extension and service programs in marketing irrespective of the type funds with which such activities may be financed, and that ESMRAC should continue to handle this assignment.
2. Dr. Byerly concluded that while it would be appropriate for the committee to recommend regarding its future existence, functions and responsibilities, that he would have no recommendations regarding changing the composition or the method of selecting the Committee. If ESMRAC recommended that this Committee be dissolved, he would consider it necessary to establish another group to exercise the advisory function which presently rests with ESMRAC.
3. The role and responsibility of ESMRAC, it was agreed, needed to be clarified if this committee is continued. It was noted that some Directors regard ESMRAC primarily as a subcommittee of ESCOP, responsible to and expected to reflect their viewpoints and those of the regional director groups.

Historically, however, it was created as an advisory committee under authority of Title III of the Research and Marketing Act of 1946. On this basis, its function is that of an advisory committee to CSRS.

The final action of the committee was an approved motion that CSRS should take appropriate action either to a) have the function of the committee officially designated as that of advising CSRS on marketing research matters; or b) dissolve ESMRAC and appoint whatever type of advisory group they (CSRS) may deem appropriate and desirable.

Another item reviewed was the question of whether the 20 percent requirement for marketing with Federal grant funds should be applied uniformly to every state. The alternative is to be concerned that the Experiment Stations as a whole meet the 20 percent legal requirement. It was pointed out that thus far, the meeting of the minimum requirement on the part of each Station has been considered as the only administratively feasible approach to assuring that the requirement is met. During the past year a few exceptions were made to the technique of allowing individual stations to develop agreements with one or more other stations, whereby one would assume a portion of the marketing responsibility for the other. It was the consensus of the committee that techniques of this type were most helpful and should be used if at all possible.

The matter of method of organization of marketing research was considered by the Committee. Concern was expressed that the arbitrary boundaries imposed by regions appears to be unduly restricting cooperative efforts. Even with the new fund allocating pattern which eliminates the need for a state to participate in many projects just in order to get funds, there still may be pressure to obtain agreement among a large number of states in a region to participate in a marketing project, whereas viewpoints and proficiency in research methods may not be comparable between these states. An alternative which was suggested would be for a small number of competent persons -- throughout the country -- with a common interest to join together and conduct a cooperative project without regard to the regions in which they are located. It was pointed out that marketing problems by-and-large are now national rather than state or regional in scope, and data on a national basis are required for their analysis. The interregional approach which has been used has been productive but is too cumbersome to use.

The major action of the joint Marketing Research-Extension-Service meeting was to reaffirm the desirability of periodic get togethers between the three units at the state level.

WAERC

Huffman reported that WAERC is proceeding with the development of several marketing research project proposals. He also reported that the carryover in the WAERC fund was \$601.20. Hereafter, this fund will be reported in full detail to Directors at their summer meeting.

Huffman mentioned the activities of the Farm Foundation Committees of WAERC. All four committees met during the past fiscal year and all four plan to publish proceedings of these meetings.

A statement on regional research procedures, developed at the request of the Committee of Nine, was adopted by WAERC for recommendation to Western Directors. The statement will be available prior to the November meeting of Directors.

He also mentioned that WAERC would be pleased to have a Rural Sociology Research Committee authorized by Directors to operate either within the Council system of committees or as a separate committee reporting to Directors through an administrative adviser. Rural sociology research is organized within combined departments in some instances. WAERC has been concerned for some time with means for developing a strong research program in this area.

Huffman reported that WAERC had voted to accept invitation to meet in Hawaii in January 1965, subject to determination that a quorum of members could be present, and to his approval as Administrative Adviser of the proposed meeting place. He mentioned the long-term membership of Hawaii in the Council; of interconnections of Mainland agriculture with the Hawaiian agricultural economy; and other aspects of the Hawaiian situation. He will present a more detailed statement of justification of the proposed meeting for decision at the November 1964 meeting of Directors. He was asked to circulate this statement to Directors in advance of the November meeting, if feasible.

WSWRC

Thorne reported that WSWRC will meet in Reno in October 1964.

HERAG

Bohmont reported on several items of interest and concern to Home Economics Research Administrators. He noted that, in particular, they wish to have their responsibilities, relevant to research proposals and project outline reviews, clarified. He also mentioned that they wanted authorization to have workgroup meetings on three subjects - one for family economics; another, for clothing; and a third, for foods. He will decide on the merits of the first two workgroup proposals as authorized at the March 1964 meeting.

Following further discussion, Bohmont moved, Sherman seconded, that a food research subcommittee of HERAG be authorized to meet October 22 in Berkeley following the meeting of the WM-26 technical committee. This motion was withdrawn in favor of a substitute motion by Thorne, seconded by Bohmont, that HERAG be instructed to draw up a two-page proposal for research in the foods area for review by Directors and possible appointment of a technical committee to develop project outline. Passed.

Upon presentation of a ten-point statement of the procedures for development of project proposals and outlines drafted by Bohmont, and revised to take account of a few suggestions offered, Price moved, Sherman seconded, adoption of the revised statement of procedures. Passed. The revised statement is on the following page.

It was noted that these procedures will be applicable for HERAG and all other such advisory groups, councils, and ad hoc committees.

Committee of
Social
Scientists

Thorne reported that he had taken two steps toward carrying out the assignment given him in March 1964 to obtain travel funds from Farm Foundation for a committee of social scientists and to organize the committee. He received assurance from Farm Foundation that funds would be available for a committee to meet on the subject of Rural Sociology research, but that there was some question of the scope of responsibility for the committee as proposed by Directors.

Thorne also reported on results of a survey he made of Directors concerning station activities in the area of social sciences. Outside of family life, current research activities are minimum. However, he found that, by limiting the subject of the committee's deliberations to social problems of rural adjustment and rural community development, perhaps ten states would be interested in having a representative on the committee at the meeting.

Following considerable discussion of possible names for the group, of the types of problems the group should consider, and other such questions, Thorne suggested that final action on establishment of a committee be deferred pending the report of a special committee appointed in March 1964 to study the need for, and functions of, a system of advisory committees to Western Directors.

Committee of
Nine

Rasmussen mentioned that the Committee of Nine has appointed a subcommittee to develop a five-year projection of the regional research program for use in hearings and other such instances. The subcommittee has pointed out that the regional research program is unique, but that its strengths need to be stressed to legislators and others concerned with experiment station research. The subcommittee drafted a letter which was sent by

PROCEDURES FOR THE DEVELOPMENT OF REGIONAL RESEARCH PROJECTS

/For the information of advisory councils, groups, and ad hoc committees of Western Agricultural Experiment Station Directors/

1. The council, group, or committee will identify areas in which research needs to be done.
2. They will then determine specific problem of greatest need.
3. A one or two page research proposal will be prepared which includes the following: (a) broadly outlining the regional problem; (b) justify the need; (c) identify general objectives; and (d) indicate interest of specific states in participation. However, firm commitment on participation is not necessary at this stage.
4. Submit the two-page proposal (through the Administrative Adviser) to the Regional Research Committee and Western Directors.
5. Upon review and recommendation of the proposal by the Regional Research Committee, Western Directors may approve the proposal.
6. An approved proposal is assigned an Administrative Adviser by Western Directors who requests all interested Western State Experiment Stations and other agencies to appoint representatives to a technical committee to draw up a research project.
7. The technical committee submits the research project outline through its Administrative Adviser to the Regional Research Committee and the Western Directors. Informational copies will be forwarded to the sponsoring council, group, or committee which may comment thereon for the information of RRC. However, this review can not be permitted to delay the activation of projects unduly.
8. The RRC may recommend approval, modification or disapproval to the Western Directors.
9. The recommended outlines are submitted by the Chairman of the Western Directors to the Committee of Nine, and, in turn, if approved, is submitted to CSRS for final authorization.
10. Upon approval by CSRS the participating states submit an individual form 20 to CSRS. Research is then authorized. Funding of the station research is decided by the station Director, and there are no funds available to the technical committee. Similarly, travel is entirely under the control and funding of the station Director.

the regional member of the subcommittee to the Chairman of each Regional Association of Directors calling for help in the five-year projection. [This request was referred to RRC by Chairman Buchanan for recommendation of a five-year projection.]

Rasmussen noted that the Committee of Nine has decided to forego a review annually of each and every active regional project; instead, it will concentrate on projects having special problems. The review subcommittee will rely heavily on CSRS to call such projects to its attention.

Rasmussen also commented that the Committee of Nine attempted to clarify the route by which outlines amended at the request of the Committee of Nine are returned to the committee. If material revisions are required, the outline should be resubmitted through RRC and Directors' associations. All other outlines may be resubmitted directly to the Committee of Nine.

Rasmussen commented on procedures for interregional cooperation, and mentioned the sugar marketing project, WM-51, as an example of potentially strong interregional cooperation with a regional project framework. Grain marketing also was mentioned as an area in which interregional cooperation might be fruitful.

Rasmussen noted that the Committee of Nine has a continuing responsibility to simplify regional research procedures. He commented upon preliminary proposals for simplifying procedures from the North Central Region, CSRS, and others. A preliminary statement on regional research procedures was requested and received from WAERC. A subcommittee was appointed to carry forward in this area.

Rasmussen called attention to the status of CRF-1, Weed Research, and its extension to 6/30/66. He mentioned that the Committee of Nine is concerned about what will happen to weed research after that date; in particular, whether facilities established with CRF and other earmarked weed research funds will continue to be used for weed research.

Rasmussen also mentioned that a Regional Research Fund reserve of \$100,000 is being held back by the Committee of Nine. If no emergency or urgent need is approved for funding at the November 1964 meeting, these funds will be released to the regions for use.

Asleson and others commented upon the five-year projections for the regional research program. Plans in the other regions for development of facilities with regional research trust funds and steps to increase specialization in areas of competence were mentioned. [See discussion on RRC recommendations, Item D, for resolution of this.]

REPORT OF THE COMMITTEE ON REGIONAL RESEARCH
to
THE WESTERN DIRECTORS
Logan, Utah
July 20, 1964

The following were present at the July 20, 1964 meeting of the Regional Research Committee at Logan, Utah:

N. W. Hilston
R. E. Ely
P. J. Leyendecker
N. F. Farris
J. O. Gerald, Recording Secretary

A. INTERIM ACTIONS

1. Projects approved and forwarded to Committee of Nine: W-83 (W-12 revised), The Nature and Inheritance of Fusarium Root Rot Resistance in Beans; W-52, Fundamental Biochemical and Biophysical Mechanisms Involved in Herbicidal Action; W-81, The Economics of Water Transfer; and W-82, Soils, Pesticides, and the Quality of Water, were all resubmitted to Regional Research Committee by May 1 as directed in March 1964 and were found to be adequate. They were recommended to the Committee of Nine for activation July 1, 1964, to extend to June 30, 1969.

WM-51, Economic Factors Affecting Sugar Marketing, was submitted to Directors and Regional Research Committee. It was approved for recommendation to the Committee of Nine, but with the caution to the technical committee that as states indicate an interest and intent to participate in the project that a very clear delineation of responsibilities be worked out by the technical committee in order to prevent any overlapping of effort. Termination is due June 30, 1969.

2. One-time Administrative Adviser Assignment. Regional Research Committee reviewed a request from the administrative adviser to W-35, Nematode Parasites of Ruminants, that a temporary adviser be appointed to attend the July 9-10 meeting of the committee. Regional Research Committee appointed Dr. J. R. Douglas, a Parasitologist of the School of Veterinary Medicine, University of California.

B. REVIEWS OF PROPOSALS FOR REVISIONS AND NEW PROJECTS

W-31, Soil Nitrogen, technical committee submitted a proposal for revision. Regional Research Committee found the proposal, Factors Contributing to the Efficiency of Nitrogen Utilization in Western Soils,

to be of regional scope and interest, and recommends that the technical committee be authorized to proceed with the revision. Regional Research Committee suggests that the committee keep objectives narrow in scope, and to evaluate carefully the regionality of the problem.

Hilston moved, Myers seconded, adoption. Passed.

W- , Rest and Dormancy in Deciduous Fruit Trees, was submitted for review. Regional Research Committee believes the numerous objectives are good, but would make too broad a study. It recommends that Hill be appointed to organize the technical committee, and that he advise the committee to attempt to develop a project around objectives A, C, and F of the proposal.

Hilston moved, Wheeler seconded, adoption. Passed.

W- , Calf Scours. Regional Research Committee learned that W-27 and W-41 technical committees have proposed that a workshop be held on this problem in the fall. Regional Research Committee recommends that Directors go on record as favoring the holding of such workshop of interested persons at state expense and that Ensign and Pritchard be requested to represent Directors at this workshop. It seems likely that they can develop a definitive proposal from such workshop for consideration by Directors at the November 1964 meeting.

Hilston moved, Hervey seconded, adoption. Passed.

There was considerable discussion of this topic as to the magnitude of the problem, the nature of the disease or diseases involved in the large calf losses, and other such questions. There were at least seven States where this problem area was judged by the Directors to represent the most urgent problem for research.

How best to organize a regional attack on the problem was discussed at length. A trust fund for the launching of a regional attack, with the organization and operation of the project to proceed along the lines used by CRF-1, Weed Control, was suggested. Special facilities at one or two Stations provided by RRF was a second suggestion. The question of how best to organize and finance the work was not resolved, but further discussion of the question may arise following presentation of a definite proposal from the workshop meeting approved earlier.

Ensign asked if representatives at the workshop should be W-27 and W-41 members, by definition, or if each

State should be asked to name one or more representatives without regard to representation on regional projects now active. The second alternative was adopted by consensus. It was also agreed, by consensus, that both veterinarians and animal nutritionists should be in attendance, and that the group should not be limited by Directors in its discussions to a single type of livestock; i.e., dairy or beef cattle or sheep.]

W- or WM- , Processing Fruits for Weight Reduction at Producing Areas for Interchange Between the West Coast and Hawaii. This proposal from the Food Processing and Technology Department at Hawaii seems amenable to the regional approach, although specific ideas perhaps should be subjected to economic and taste-test evaluations prior to embarking on large-scale endeavors. Regional Research Committee recommends that Henderson be appointed as administrative adviser to proceed with organization of a technical committee. If a project is developed, attempt should be made to have it qualify as a marketing project.

[Hilston moved, Ely seconded, adoption.

[Thorne and others raised question as to whether the title need be restricted by the phrase, "for interchange between the West Coast and Hawaii." They pointed out that interchanges between numerous other points likewise might be benefited by weight reduction at producing areas.

[Hervey moved, Henderson seconded, that the motion be amended to delete the phrase limiting the study to interchange between the West Coast and Hawaii. Passed.

[The amended motion passed.]

WM- , Changing Price Relationships and Distribution Patterns for Livestock Feeds. This proposal was referred to WAERC by Directors in November 1963. Regional Research Committee concurs in the WAERC recommendation that it be authorized for development and activation July 1, 1965. Regional Research Committee recommends that Huffman be appointed as administrative adviser to organize the technical committee for planning.

[Hilston moved, Hervey seconded, adoption. Passed.]

WM- , (WM-40 revision or replacement), The Nature of Promotional and Pricing Practices of Food Retailers. Following careful consideration of the audience for results of this study, usefulness of information

gained to producer and other groups, and other questions, Regional Research Committee concurred in the WAERC recommendation that the WM-40 committee be authorized to proceed with development. It further concurs in the WAERC suggestion that the technical committee should reconsider if the objectives are broad enough to provide reasonable coverage of the problem under study. Regional Research Committee recommends concurrence in the WAERC recommendation.

Hilston moved, Sherman seconded, adoption. Passed.

WM-, Noneconomic Marketing Areas. Regional Research Committee received the summary of interest by states in participating in several project areas. Utah made the survey and prepared this summary of responses by ten states. The summary follows:

Marketing Area	: Colo.:	Haw.:	Ida.:	Mont.:	Nev.:	N. M.:	Ore.:	Utah:	Wash.:	Wyo.
	:	:	:	<u>Degree of interest in area</u>			:	:	:	:
1. Post Harvest Physiology of Fruits & Vegetables	: H	: H	: H	: L	: L	: M	: H	: H	: H	: M
2. Processing Fruits & Vegetables *	: H	: H	: M	: L	: L	: M	: H	: M	: L	: L
3. Meats	: H	: M	: L	: M	: H	: H	: H	: M	: M	: H
4. Dairy Products	: M	: L	: M	: M	: L	: L	: H-M	: M	: L	: H
5. New Uses of Farm Products	: M	: L	: L	: M	: M	: L	: M	: L	: L	: M
6. Recreation	: H	: M	: M	: H	: M	: M	: M	: H	: L	: M
7. Consumer Preferences	: L	: H	: M	: H	: H	: H	: L	: H	: M	: L
8. Advertising Information	: M	: M	: L	: M	: M	: L	: M	: M	: M	: L

* Authorized for planning; Henderson appointed to organize and advise technical committee.

Regional Research Committee recommends that Utah or any other sufficiently interested states proceed with the preparation of proposals for projects in one or more of the areas shown in the summary.

Hilston moved, Sherman seconded, adoption. Passed.

C. RECOMMENDATION TO EXTEND

The Regional Research Committee reviewed the WAERC recommendation of the WM-38, Cooperative Marketing, technical committee's request for extension to 6/30/66. RRC noted that this represents a one-year extension on a project

planned for a three-year duration. RRC also noted that the term was set at a time when WAERC and economics technical committees were under the impression that durations in excess of three years on regional marketing projects would not be approved. RRC recommends extension to 6/30/66.

Hilston moved, Wilson seconded, extension. Passed.

D. PROJECTIONS OF THE REGIONAL RESEARCH PROGRAM

RRC reviewed a request from the Committee of Nine for a 5-year projection of the West's regional research program. RRC wishes to remind Directors of last November's decision to refer such requests to ad hoc committees rather than to the heavily-burdened RRC. In the brief time available for the assigned task, RRC developed the following suggestions:

1. It seems unwise to specify an organizational pattern or exact procedural details of regional research prior to knowing the substantive content of specific projects. Thus, RRC was unable to reconcile one proposal on regional organization and philosophy received with the task at hand.
2. RRC developed the following six titles simply as guides or suggestions: The priorities shown in brackets were developed by consensus of Directors; see discussion below here.
 - (a) Water Resources Management and Development
 - (b) Chemical Residues Priority I
 - (c) Multiple Uses of Land Resources Priority III
 - (d) Biological Control of Plant and Animal Pests Priority II
 - (e) Air and Water Pollution Priority V
 - (f) Cooperative Purchasing, Bargaining, and Marketing Priority IV
3. If Directors choose to adopt these suggestions as their projections, RRC suggests that particularly interested states be asked to undertake completion of the assignment from the Committee of Nine. This was, "Each proposal should include a brief statement of the objectives, an estimate of the needed staff, cost of facilities and equipment, the cost of operation, suggested cooperation with other agencies and any other pertinent information. If a facility is proposed, each such proposal should be supported by a brief statement of

Thorne moved, Sherman seconded, that Western Directors go on record as favoring publication of regional bulletins emphasizing results of regional significance, regardless of the source of financing for the research, and that current and future technical committees be instructed to plan projects for and to develop regional publications in feasible instances. Passed.

Thorne moved, Sherman seconded, that RRC be asked to review Western Directors' policies on regional publications relative to a regional numbering system, identification as regional, method of financing, etc., and bring in recommendations for consideration at the November 1964 meeting. Passed.

F. ADMINISTRATIVE ADVISER ASSIGNMENTS FOR 1964-65

RRC reviewed 1963-64 adviser assignments, project terminations and activations, and proposals recommended for development during 1964-65. In addition to assignments to new areas recommended above, RRC recommends the following shifts:

W-31, Soil Nitrogen, from Myers to Frevert, to facilitate advice to committee at WSWRC meeting.

W-50, Stresses and Performance of Hens, from Rosenberg to Rasmussen. RRC calls to the attention of the adviser that this project is now authorized for revision during 1964-65.

W-78, Turkey Breeding, from Rosenberg to Meyer (Davis).

WSWRC, from Thorne to Frevert, per Thorne's suggestion at March 1964 meeting.

A complete list of advisers is attached at the end of these Minutes.

Hilston moved, Cameron seconded, adoption. Passed.

G. PROJECTS TERMINATED JUNE 30, 1964

RRC wishes to call to the attention of Directors and Advisers that the following projects terminated June 30, 1964:

1. W-5, Poultry Diseases.
2. W-7, Turkey Breeding, replaced by W-78.
3. W-12, Root Rot Diseases, replaced by W-83.
4. W-16, Range Economics, replaced by W-79.
5. W-39, Fluorides.
6. W-70, On-Farm Water Use.
7. W-73, Water Conservation.
8. W-75, Ground-Surface Water Resource Management.
9. W-76, Farm Labor Requirements.
10. WM-20, Hay and Feed Marketing.
11. WM-42, Initial Timber Processors, replaced by WM-50.

Policies for
Reimbursement of
Travel Expenses
from Special
Travel Fund

Price discussed the assignment of the committee composed of Price, Chairman; Buchanan and Peterson, to develop a policy for reimbursement of travel expenses from the special travel fund held at Montana. The committee developed a statement of policy for recommendation to the group.

"The travel of representatives of the Western Stations to be authorized for reimbursement from the special fund is as follows:

- "1. To meetings of the Legislative Subcommittee of the Western members, but not including any meetings called consecutive with and at the place of the annual conventions of the ASU&LGC.
- "2. To meetings of ESCOP by Western members, but not including any meetings called consecutive with and at the place of the annual conventions of the ASU&LGC.
- "3. To Western Agricultural Economics Research Council meetings of the WAERC Administrative Adviser.

"Each person claiming reimbursement from the special fund will certify on his voucher that claims are in accord with the travel rules and regulations of his station and will state the general purpose of the trip. Any claims about which the Treasurer of the fund is in doubt will be discussed by the Treasurer with the Chairman of Western Directors and the Senior Western Representative on ESCOP.

"Claims will be paid in the order in which they are presented to the Treasurer of the fund. In the event that the fund is nearing depletion, the Treasurer will notify those persons then having authorization to claim reimbursement in order that arrangements can be made for expenses of subsequent trips to be reimbursed by the stations of the travelers.

"These policies will be adopted upon a majority affirmative vote of the twelve Station Directors, and may be amended by similar vote."

Price moved, Rasmussen seconded, acceptance of the report of the committee and adoption of the policy statement.

Question was raised if the funds available would be sufficient to cover the travel envisioned by the policy. Price reviewed estimates the committee made which indicated that perhaps the fund would be sufficient to cover all claims.

Question was raised concerning the travel of the WAERC Administrative Adviser to WAERC meetings. Thorne and Bohmont pointed out that their travel to WSWRC and HERAG meetings could be considered equivalent in nature to that of the WAERC Adviser travel.

Price pointed out that the WAERC Advisership had been lodged at Montana regularly since the mid-1950's and that Montana had, and has agreed to continue to handle, the special fund with no charge to the Region. Such long-term advisership creates a burden on State funds. It was further noted that WSWRC meetings were usually concurrent with technical committee meetings, thereby permitting travel at P&C expense and that no special funds need be provided for the WSWRC Adviser. He did, however, point out that his committee had proposed that the travel of the WAERC Adviser would be paid from the special fund only so long as there were only one or two such advisory councils in existence. He noted that the payment of administrative adviser travel for several such councils from the special fund might rapidly exhaust the fund.

Leyendecker moved, Myers seconded, that the motion be amended to delete Item 3 relative to WAERC Adviser travel from the policy statement. Passed. The main motion as amended passed.

Clearance of
Survey Schedules
by Western
Directors

Question was raised as to the policy of Western Directors relative to the clearance of survey schedules submitted to stations by individuals and organizations. At the time this question was discussed in March 1962, it was concluded that there would be no joint consideration of the appropriateness or the responses to such surveys. No further action was deemed necessary at this time.

/At this point, Chairman Buchanan arrived at the meeting and assumed the Chair./

1965 Collabora-
tors' Conference
at WURDD

Stitt of the Western Utilization Research and Development Division, Albany, California, described three topics which the Lab feels might be suitable subjects for the 1965 Collaborators' Conference. These topics were: 1) The Importance of Mold Metabolites in Agricultural Products; 2) Chemistry of Color Changes Encountered in Foods; 3) Improved Fabrics from Natural Fibers.

These three topics were submitted to balloting to determine Directors' preferences for the Conference. No. 1, The Importance of Mold Metabolites in Agricultural Products, was selected as first choice of Directors. Kelly was appointed to represent Directors at the 1965 Conference and he was authorized to appoint a member of his staff to participate with the Laboratory personnel in developing the program for the Conference.

Buchanan thanked Stitt for his description of the suggested topics and for his attendance at the meeting.

Facilities Needs
and Research

Price discussed with Directors the various activities in USDA in planning for appropriation requests for the development of both ~~WURDD and WURDD facilities~~ ~~in particular~~

represent a good location for such facilities because of the ability to provide special training for laboratory personnel and because of the generally good scientific services and atmosphere surrounding campuses.

Price introduced Dr. E. C. Elting, Assistant to the Director for Science and Education of USDA, who discussed USDA facilities' plans with Directors. Dr. V. L. Harper, Deputy Chief of the Forest Service, and Dr. Pechannec, Director, Intermountain Forest and Range Experiment Station, joined in this discussion relative to Forest Service research facilities planned for construction or improvement in the Western Region. A list of facilities planned by USDA in each of the 12 Western States was supplied to each Director.

Elting commented on general aspects of facilities plans and reported that it is the Department's desire to enter into cooperative planning with the States for construction and improvement of facilities. He noted that the act authorizing facilities for the State Stations makes such cooperation a two-way possibility.

Chairman Buchanan summarized discussions by listing four areas of policy consensus which he thought had emerged from the discussions between the Directors and USDA representatives. These were:

1. To develop long-term plans cooperatively for both USDA and University facilities. There is a desire on both the part of USDA and of ESCOP to cooperate in this planning;
2. To coordinate research activities, if possible, in conjunction with University locations;
3. To coordinate facilities planning with the regional research program and, vice versa, to coordinate the regional research program with facilities.
4. To develop procedures for carrying out these policies.

Elting mentioned several regional laboratories planned by USDA which are not to be operated in conjunction with a specific university or campus, but rather would serve several States or areas. These proposed facilities and the stage in the five-step plan under which they would be constructed are as follows:

<u>Area</u>	<u>Description of Project</u>	<u>Step</u>
Southwest	Phreatophytes Laboratory	I
Intermountain	Crop Protection Lab (weeds)	V
Pacific Northwest	Crop Protection Lab (weeds)	V
Southwest	Human Food and Metabolic Research Laboratory	I
Southwest	Irrigation Principles Lab	V
Rocky Mountain	Hydraulics Laboratory	V
Central Great Plains	Soil Moisture Conservation Laboratory	III

Price raised the question, now that the States know USDA plans for facilities, what will be the States' plan of action to align their facilities and requests for new facilities with the Federal plan? Also, how will the regional research program be affected by these facilities plans and in what way does the regional research program indicate facilities' needs. He summarized his own views based on responses he has received to his letter and on Oregon's situation, regarding these questions as follows:

1. The act providing for facilities for the State Stations will not substantially change campus building programs in the West. The funds envisioned from this source are small relative to those to be obtained from other sources. Thus, efforts to specialize facilities provided from the facilities act funds can have only nominal impact on the degree of specialization in campus programs.
2. Any facilities needed by the regional research program will have to be provided almost entirely by the States cooperating in the regional program. Regional research funds cannot affect facilities construction in any major way.
3. Even if Directors set aside ten percent of the Western Regional Research Fund to be used on physical facilities, this would not likely be as profitable a use of the \$180-200,000 annually as would similar investment in personnel and other operating costs.

Myers noted that many USDA facilities are Regional or National in scope. He asked why regional research funds should be used to construct facilities identical in character and purpose to these USDA facilities. He pointed out that the Region would lose control relatively soon of any facilities built in any particular State with RRF and called attention to the contribution now being made to the regional research program by projects conducted in USDA laboratories.

Price mentioned that specialization of a particular station on a narrow area will reduce the distinction which now exists between USDA and State station research programs. He indicated that station missions are different in the minds of Congress and others, than is that of the USDA. He suggested that if a regional problem can be solved in one place and if facilities are necessary for the research which are not available, then the Directors should take steps to provide the facilities. However, he stated that, in his opinion, a trust fund set aside at the regional level should not be allocated year by year on a

Price, Hervey, and others suggested that Federal facilities located in the West can conduct much of the research needed in the regional research program and that control of the research conducted in these facilities is achieved by way of interchange of ideas with the personnel of these facilities. The approach being taken in the North Central Region in planning facilities is attempting to aid each station in specializing in an area of competence but not at the expense of loss of competence in any current field; i.e., each station remains broad-scale in its attack on problems of the State but uses any increases in funds for the development of special competence in one or a few areas of region-wide significance.

Buchanan asked if the following could be agreed upon for the West:

1. RRF will be used for the construction of Station facilities needed for the conduct of regional research projects; and
2. Each Station will concentrate on a unique area of competence for the Region with its RRF allotment. The areas for specialization are the five suggested earlier by RRC and ranked in order of priority by Directors [see page 17].

Thorne suggested that each State should attempt to reduce its participation in regional research projects by 50 percent. Price thought this might be too severe a reduction. He agreed that concentration on areas of competence must be encouraged, but that this might be done more effectively through increased funds rather than by a sudden shift in total emphasis. He pointed out that no State can afford to rely on other states to solve problems of pressing concern to vocal interests within the State. In his opinion, all stations must maintain some competence in all fields of direct interest and concern in that State.

No final consensus on procedure to follow in planning for facilities construction or in concentrating on areas of competence was reached. However, the host Director was authorized by consensus to release information to the press that Directors discussed emergency problems in the West, including calfhood mortality and harvest labor requirements, which seem likely to exact first priority in use of any increases in appropriations; and also discussed areas in which Stations might concentrate their competences as a second order of priority.

The Chairman thanked Elting, Harper, and Pechanec for taking part in these discussions with Directors.

Advisory Com-
mittees to
Western
Directors

Frevort reported for the committee composed of himself, Chairman; Bohmont, Huffman and Thorne, which was appointed in March 1964 to study the role of advisory committees to Western Directors and to recommend regarding a system of such committees, at this

meeting. The committee studied the system in operation in the North Central Region which has 18 advisory committees in existence. The committee attempted to reduce the number of committees to be recommended for the West by combining disciplinary areas into seven broad councils. Due to the problem of representation on such councils and the diverse disciplines which might be in attendance at any one council meeting, the committee concluded that this represented no solution for the West. The committee next considered the possibility of an ad hoc system of advisory committees; each to be limited to a specific disciplinary or problem area.

Frevert moved, Thorne seconded, that the Western Directors authorize the RRC to suggest areas of research which should be reviewed by ad hoc advisory committees; that one, or more, member from each interested Station be duly appointed by the Directors of the Stations who will recommend to the Western Directors, through RRC, needs for and priorities of research problems within the assigned area; and that each advisory committee will be discharged upon the submission of its report unless specific approval of the Directors is made for continuance.

Huffman stated that he had considerable reservations concerning the results to be achieved by such an ad hoc committee. He pointed out that even continuing groups, such as WAERC, run into severe problems in attempting to establish priorities on problem areas. He asked about the distinction to be drawn between an ad hoc committee and a technical committee.

Thorne, Huffman and others asked if this motion would affect the functions and standing of WSWRC, WAERC and HERAG. Frevert indicated that the motion implied no change in the status of councils, committees and groups already authorized by Directors on a continuing basis.

Hill asked how such committees would relate to the research committees of Western Sections of various professional associations, and if such research committees have any official standing with Western Directors. The Chairman asked the Recording Secretary to read a relevant portion of the July 1960 Minutes (pages 18-20). The discussion and action at that time indicated that no official channel for communication between such committees and Western Directors would be established.

The motion passed.

Upon impromptu recommendation of RRC, Thorne moved, Hilston seconded, that the Administrative Adviser to the Social Science Committee be authorized to apply to Farm Foundation to furnish travel funds for men in behavioral sciences to review field and to make recommendations for studies on rural and rural-urban problems in their field.

Price asked if the motion would exclude agricultural economics. The opinion was expressed that agricultural economics is

adequately organized to carry out continuing reviews in its field through WAERC and its several committees.

The motion passed.

Examples of
Results of Re-
gional Research

Price discussed the problems he has experienced in finding good examples of the effectiveness of regional research for use in hearings and in other instances requiring illustrations of regional research accomplishments.

Price moved, Sherman seconded, that each Administrative Adviser in the West be held responsible for obtaining at the next meeting of their technical committees, a one-page summary of accomplishments of each regional project, which would be furnished to the Chairman of Western Directors for use by Legislative Subcommittee, Committee of Nine, CSRS, and others, in illustrating accomplishments. This one-page summary would be accompanied by any photographs, charts, drafts, tables, etc., as desired by the committees. Passed.

Nominations for
1964 Elections

Asleson presented the report of the Nominating Committee as follows:

Chairman, Western Directors	- R. E. Huffman (1 yr. term)
Vice-Chairman, Western Directors	- M. T. Buchanan (1 yr. term)
Secretary, Western Directors	- E. G. Linsley (1 yr. term)
Regional Research Committee	- R. W. Henderson (3 yr. term)
Alternate, Reg. Res. Committee	- K. W. Hill (1 yr. term)
Alternate, Committee of Nine	- R. E. Ely (1 yr. term)
ESCOPE	- R. K. Frevert (3 yr. term)
Legislative Subcommittee	- R. K. Frevert (3 yr. term)
ESMRAC (if needed & appropriate)	- R. M. Alexander (full term)

Asleson moved, Sherman seconded, acceptance of the report. Passed.

The Chairman called for other nominations. Myers moved, Leyendecker seconded, that the nominations be closed and a unanimous ballot be cast for the slate of nominees recommended by the Nominating Committee. Passed. Elections will be held by the Experiment Station Section in November 1964.

Seminar on the
Research
Environment

Directors enjoyed a seminar on the research environment arranged by the Advance Study Program of the Brookings Institution. Dr. F. W. Luikart, senior staff member at Brookings, explained the purpose, scope, and work of the seminar. Dr. R. B. Cattell, Professor Psychology at the University of Illinois, described the individual in the research process. Dr. V. K. Heyman, Systems Analyst of the Department of Defense, described certain criteria Directors might use in choosing among program alternatives. The session was conducted as a seminar with questions being raised throughout the course of the seminar.

No attempt was made to record the presentations or question and answer responses, as these were presented in skeleton form in a bound volume by the Brookings Institution.

Appreciations
to Host Station
and Others

Asleson moved, Price seconded, that the report of the Resolutions Committee be adopted. The report follows:

WHEREAS, the Western Association of Agricultural Experiment Station Directors, including CSRS representatives and guests, have been provided with excellent meeting facilities, motel accommodations and transportation for their meeting in Logan, and together with wives and families have enjoyed a dinner and steak-fry in beautiful surroundings; and

WHEREAS, wives of participants have been escorted and entertained in a most enjoyable manner;

BE IT, THEREFORE, RESOLVED, that the Western Association of Agricultural Experiment Station Directors express their sincere appreciation to Directors Thorne, Hill and Burgoyne and their wives and staff for the excellent arrangements and hospitality which contributed so much to a profitable and enjoyable meeting.

- - -

WHEREAS, the Western Association of Agricultural Experiment Station Directors, including CSRS representatives, have been privileged to take part in a Seminar on Research Environment conducted by the Brookings Institution which has provided each of us with a much better insight into, and analysis of, the social and behavioral aspects of research administration;

BE IT, THEREFORE, RESOLVED, that the Western Association of Agricultural Experiment Station Directors express their sincere appreciation to Dr. Knoblauch and his staff for making arrangements for the Seminar and to Dr. Luikart, Dr. Cattell, and Dr. Heyman for a stimulating, profitable, and challenging seminar.

The motion passed unanimously with applause.

March 1965
Meeting

Buchanan asked if the dates of March 3-5, 1965, would be satisfactory for the spring meeting of Western Directors to be held in Berkeley-Albany. He pointed out that by long-standing

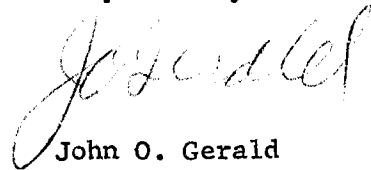
tradition Directors meet in Berkeley every second spring and have a joint one-half day session with WURDD representatives to discuss developments and emerging problems of interest to WURDD. There were no objections to the proposed dates.

Buchanan suggested that the summer 1965 meeting be discussed at the November 1964 meeting of Western Directors.

Adjournment

The meeting was adjourned.

Respectfully submitted,



John O. Gerald
Recording Secretary

Administrative Adviser Assignments, 1964-65

W-1	Beef Cattle Breeding	Wheeler
W-6	New Plants	Wilson
W-24	Cotton Mechanization	Frevert
W-25	Rangeland Improvement	Hervey
W-27	Sheep Vibriosis	Pritchard
W-31	Soil Nitrogen	Frevert
W-34	Range Livestock Nutrition	Hilston
W-35	Ruminant Parasites	Pritchard
W-37	Rangeland Grasshoppers	Linsley
W-38	Fungus Root Diseases	Hervey
W-40	Breeding Forage Plants	Ensign
W-41	Urinary Calculi	Pritchard
W-44	Cholesterol Metabolism	Wheeler
W-45	Pesticide Residues	Boyce
W-46	Stresses, Cattle and Sheep	Ely
W-48	Weather and Crops	Asleson
W-49	Cattle Breeding Failures	Oxley
W-50	Stresses and Performance-Hens	Rasmussen
W-51	Drainage Design	Frevert
W-52	Biochemistry, Herbicidal Action	Rasmussen
W-54	Adjusting Farming	Asleson
W-56	Nematodes and Root Diseases	Asleson
W-57	Amino Acid Utilization	Hilston
W-58	Forage Crop Production	Ensign
W-60	Textiles	Bohmont
W-61	Sheep Breeding	Oxley
W-64	Fruit Viruses	Kraus
W-65	Irrigation Hydraulics	Frevert
W-66	Soil Structures	Thorne
W-67	Soil-Plant-Water Relationships	Thorne
W-68	Soil Moisture Movement	Thorne
W-69	Housing	Rasmussen
W-71	Tree Seedling Establishment	Vaux
W-74	Leguminous Forage Insects	Linsley
W-77	Weed Control	Bohmont
W-78	Turkey Breeding	Meyer
W-79	Range Management Decisions	Leyendecker
W-80	Textiles	Bohmont
W-81	Water Transfer	Thorne
W-82	Water Quality	Thorne
W-83	Bean Breeding	Ensign
W-	Clay Mineralogy	Asleson
W-	Rest and Dormancy, Fruit Trees	Hill
WM-16	Grain Insect Control	Boyce
WM-26	Consumer Purchases	Alexander
WM-33	Meat Quality	Alexander
WM-35	Seed Marketing	Henderson
WM-38	Cooperatives	Alexander
WM-39	Direct Buying, Livestock	Buchanan

WM-40	Retail Procurement	Buchanan
WM-43	Bulk Handling	Henderson
WM-44	Promotion and Utilization	Huffman
WM-46	Milk Market Organization	Ely
WM-47	Fruit & Vegetable Marketing	Alexander
WM-48	Livestock Pricing	Buchanan
WM-49	Cotton Marketing	Leyendecker
WM-50	Lumber and Plywood Marketing	Henderson
WM-51	Sugar Marketing	Kelly
WM-	Livestock Feeds Pricing	Huffman
W- or WM-	Fruit Weight Reduction	Henderson

Interregional and Central Research

IR-1	Solanum	Kraus
IR-2	Deciduous Tree Fruit Stocks	Kraus
IR-3	National Policies	Huffman
IR-4	Chemical Clearances	Boyce
CRF-1	Weed Research	Rasmussen

Other

WSWRC	Frevert
WAERC	Huffman
HERAG	Bohmont
SSC	Thorne