

MINUTES OF THE MEETING
OF THE WESTERN ASSOCIATION OF AGRICULTURAL EXPERIMENT STATION DIRECTORS
AND WESTERN SEA-AR ADMINISTRATORS

Monterey, California

August 6-8, 1980

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SUMMARY OF ACTIONS

Western Directors Association and SEA-AR

August 6-8, 1980

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1. Recommended that ESCOP be requested to prepare a mission-policy statement on the SAES to be ready for review at Land Grant.	15
2. Heard report of Chairman/Executive Comm. and approved recommendations that:	
a. C/9 be requested to ask IR-1 and IR-2 to prepare detailed budget requests for review at WDA April meeting, which would include several alternatives under a fee-for-service structure;	16
b. WDA By-Laws be amended to change the term of service of WDA officers and representatives to a calendar-year basis;	17
c. RIC review the revision of IR-6 and make recommendations on its acceptance at Land-Grant;	
d. State assessments for support of DAL and WDA Special Fund be reapportioned to reflect full shares for Guam and Alaska;	18
e. WDA hold a full meeting at Land-Grant;	20
f. WDA meet in Alaska in the summer of 1981;	20
g. Elected officers for 1981.	20
3. Tabled motion until Land-Grant to recommend priority be given to formula-funded animal health and disease projects under the special grants program, if formula funds are withdrawn in FY 81.	28
4. Approved 8 Resolutions	28
5. Heard report of RIC and approved recommendations which:	
a. approve project revision for W-133 Outdoor Recreation	D-53
b. approve project revision for W-144 Social Competencies	D-53
c. approve establishment of ad hoc technical committee on Population Dynamics of Weeds as Parameters of IPM Systems	D-54
d. approve new project on Consequences of Energy Conservation Policies for Western Region Households	D-54
e. approve one-year extension of W-145 Marketing of U.S. Beef	D-54
f. approve one-year extension of WRCC-23 Clothing & Textiles	D-54
g. approve 3-year extension of WRCC-28 Crop Loss Appraisals	D-55
h. approve 1-year extension of W-Food Processing and the environ.	D-55
i. approve the following changes in Advisor assignments:	D-57
W-110 Bark Beetles - J. B. Kendrick and P. Casamajor	
W-140 Energy - D. L. Oldenstadt	
W-147 Soil-Borne Plant Pathogens - N. I. James and L. L. Boyd	
W-148 Climatic Models - J. M. Hughes	
W-150 Beans - K. J. Lessman	
IR-6 Planning - M. T. Buchanan	
WRCC-28 Crop Loss Appraisals - M. R. Nelson (AZ)	
WRCC-38 Exposure to Pesticides - I. J. Thomason (CA)	

JOINT MEETING OF
WESTERN ASSOCIATION OF AGRICULTURAL EXPERIMENT STATION DIRECTORS
AND WESTERN SEA-AR ADMINISTRATORS

MINUTES OF SUMMER 1980 MEETING

August 6-8, 1980
Casa Munras Garden Hotel
Monterey, California

ATTENDANCE:

Arizona	- L. W. Dewhirst	SEA-AR	- H C Cox
	- R. R. Rice		- W. G. Chace
California	- J. R. Anderson		- R. L. Olson
	- P. Casamajor		- F. Strauch
	- J. B. Kendrick, Jr.		- C. A. Reder
	- L. L. Sammet		- W. J. Whorton
Colorado	- D. D. Johnson		- E. B. Knipling
	- J. P. Jordan		- P. H. van Schaik
	- H. F. McHugh		- C. E. Evans
Guam	- W. P. Leon Guerrero		- J. M. Vetterling
Hawaii	- N. P. Kefford		- R. D. Plowman
Idaho	- R. J. Miller		- N. I. James
Montana	- J. A. Asleson		- D. A. Price
Nevada	- R. A. Young		- H. P. Binger
New Mexico	- V. H. Gledhill		- R. P. Murrmann
Utah	- C. E. Clark		- T. B. Kinney, Jr.
Washington	- L. L. Boyd	SEA-CR	- C. I. Harris
	- W. G. Huber		- W. I. Thomas
	- D. J. Lee	SEA-TIS	- H. Burton
	- D. L. Oldenstadt		- R. A. Farley
Wyoming	- C. C. Kaltenbach	ESCS	- M. L. Cotner
	- H. J. Tuma	FS	- D. E. Herrick
OWDAL	- M. T. Buchanan		- J. S. Krammes
	- J. E. Moak	Others	- M. Van Elswyk, Jr.
ASCUFRO	- R. M. Kallander		- G. E. Brown, Jr.
Home Economics	- B. E. Hawthorne		- D. W. Krogmann
			- R. L. Caldwell
			- J. L. Baritelle

1.0 Call to Order

The meeting was called to order by Chairman Johnson at 8:10 am.

2.0 Introductions

Kendrick introduced Dr. Loy L. Sammet, Acting Director of the California Agricultural Experiment Station and Assistant Vice President--Agriculture and University Services. Dr. Sammet will be Acting Director until the search for a permanent Director is completed.

3.0 Announcements

Local arrangements were announced throughout the meeting. Chairman Johnson appointed a Resolutions Committee consisting of Gledhill (Chairman) and Kaltenbach.

4.0 Adoption of Agenda

The agenda was adopted as distributed, and is included as Appendix A, pp. 34-35.

5.0 Distribution of Written Reports/Discussion of Procedures for Afternoon Sessions

Written reports to be presented later in the meeting were distributed to attendees. Chairman Johnson discussed the arrangements for the subregional planning discussions in the afternoon.

6.0 Report on Office of Technology Assessment (OTA) Task Groups - J. B. Kendrick, Jr.

Kendrick distributed a written report which included the OTA project statement and the membership of the task groups*. Kendrick is a member of Task Group II, charged with examining food and agricultural research in the Federal government, SAES, and private sector with special emphasis on post-harvest research.

It is his perception that this is going to be a very important study, which will influence future agricultural legislation. Some of the assumptions underlying the study are: (1) there is an unclear demarcation of what are appropriate research problems for the USDA vs. SAES vs. the private sector; (2) there is a lack of a scientific basis for determining national, regional, and local research problems; (3) there is an apparent lack of overall research planning especially at the top levels of administrations; and (4) there is too much duplication of research and vying for funds.

Each of the three Task Groups has commissioned a number of working papers which will receive wide review.

The assumptions underlying the study, and comments Kendrick has heard, indicate there is not much understanding of how a university system operates, and that we have not done a very good job of explaining the planning and priority-setting processes we use.

7.0 Report on Joint Council on Food and Agricultural Sciences - J. S. Robins

I hope you are all receiving copies of the Joint Council Proceedings which are issued following each quarterly Joint Council meeting. If you are not, please let me know. The Proceedings are intended to keep all elements of the Agricultural Sciences community advised of Joint Council activities and thus this report will merely highlight a few of the Council's activities.

1. We are now in final stages of implementing the regional and national planning and coordination structure. All four Regional Councils and most of the regional teaching, research and extension planning committees have been constituted. We are gathering names and will be appointing the national functional planning committees within the next month or two.

* Available on request from the Recording Secretary.

2. We are continuing special coordinative efforts in Integrated Pest Management and in Human Nutrition and have initiated in-depth studies of Energy in Agriculture as a special effort this year.
3. A number of rather significant reports have been issued during the past six months or so. Of particular significance are the reports, "Areas of Emphasis in the Food and Agricultural Sciences for the Early 1980's," and the "Report on the Joint Council Committee on Human Nutrition." We also look forward to early publication of the second part of the Research Facilities Report. We also participated from time to time in the development of the "Higher Education Manpower Assessment Report," the "Renewable Resources Extension Plan" and the "Extension Evaluation Report to Congress." If you have not seen copies of these several publications, write to Executive Secretary, Joint Council on Food and Agricultural Sciences, Room 351A, Administration Building, U.S. Department of Agriculture, 14th and Independence Avenue, S.W., Washington, D.C. 20250.
4. We have had some additional turnover of Joint Council membership. George Sledge, University of Wisconsin, replaced Charles Browning; Susan Oace, University of California, replaced Doris Calloway; and Pat Jordan replaced John Mahlstedt in January of this year. Earlier, Dick Skok, University of Minnesota, replaced Emery Castle.

DISCUSSION:

Jordan discussed the joint JC-UAB meeting in July, where he found the two groups moving toward greater agreement on issues. There was a lengthy presentation on evaluation methodology. The JC established a Strategies subcommittee to inform the public about the JC and the planning system. Additional items included discussion of the new synfuels bill, the USDA ad hoc energy committee, the USDA directory identifying the Department's energy programs and the primary contact people for them.

Buchanan elaborated on the status of the Physical Facilities report. The JC established two subcommittees--one for policy issues, and one for the survey data. The policy report was substantially changed by the Department before submission to the Congress. The survey data is now ready for publication. The revised draft proposes to give a highly summarized national picture and indicate that individual state data is available on request.

8.0 Report on Interim National Research Planning Committee - M. T. Buchanan

This committee was appointed by the JC to continue the regional and national planning previously conducted under ARPAC. This involves two major components:

1. Regional and national task forces or work groups selected to assess research needs in high priority areas. Examples include dairy, beef and forage, range, soybeans and, recently, corn.
2. The five-year forward projection process which facilitates a systematic assessment based on the judgments of scientists and administrators of research program needs under two assumptions: No increase in total funds, and a 20 percent increase.

INRPC's most recent meeting was July 24, 1980.

There are now in place four Regional Councils. There are also regional research, extension and teaching committees that report both to the Regional Council and to the appropriate functional national committee. The Joint Council with the assistance of its Steering Committee reviews and coordinates the efforts of the Regional Councils and of the regional and national functional committees.

The INRPC with minor changes in membership will become the National Research Committee.

At its meeting on July 17, the Joint Council finalized membership on the National Research Committee as follows:

<u>Number</u>	<u>Representing</u>	<u>To be selected by</u>
5	1 - FS 1 - ESCS 3 - SEA	USDA
5	Land Grant Institutions	4 SAES by ESCOP 1 1890 Institutions by Research Administrators of Eligible 1890 Institutions
1	Forestry	ASCUFRO
1	Home Economics	Home Economics Research Admin's
1	Veterinary Medicine	Deans, Colleges of Vet Medicine
1	Am. Assoc. of State Colleges & Univ's	AASCU
1	Private universities	Assoc. of American Universities
1	Agricultural Research Instit.	ARI
1	National Extension Comm. Liaison	NEC
1	National Teaching Comm. Liaison	NTC
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9.0 Report on National Agricultural Research and Extension Users Advisory Board - M. T. Buchanan

Appendix B (pp. 36-38) contains Jim Halpin's report on the July 14-16 UAB meeting. Buchanan did not attend the meeting; the other two DAL's together with one Director from each of the Northeastern states took a tour of Bell Laboratories' research and development unit on that date. Keith Huston was in China.

As the DAL's have observed the UAB sessions, and especially the materials prepared for the members by staff, they have come more and more to the conclusion that the State-side perspective needs buttressing. Despite criticisms and problems, however, the UAB continues to render a useful

service by pointing to the need for substantially increased funding for agricultural research, extension and teaching. The priorities they espouse also are quite in line with our own.

The three meetings of the UAB preceding their July meeting were held in Berkeley, CA, Orlando, FL, and St. Paul, MN.

10.0 Committee Management by Computer Conferencing - R. L. Caldwell

Dr. Caldwell is Director of the Council for Environmental Studies and Associate Professor of Plant Pathology at the University of Arizona. Prior to the meeting he distributed a couple of articles on Computer Conferencing.* During the meeting, he distributed an extensive handout (45 pages) on Computer Conferencing, part of which is included as Appendix C, pp. 39-52.

11.0 Report on SEA - Technical Information Systems - R. A. Farley

Dr. Richard A. Farley is Administrator of SEA-TIS.

TIS is composed of the National Agricultural Library and a number of management referral and data bases. Most of the activities are centralized in the NAL building in Beltsville. Dr. Hilary Burton, developer of the Current Awareness System, is located in the Oakland office of SEA-AR and is available to help you with your information needs.

The Current Research Information System (CRIS) became a part of TIS during reorganization, and was moved from Washington, D.C. to the NAL building in Beltsville. Some of the employees elected to leave CRIS at the time of the move, and a major problem has been the recruitment and hiring of new personnel. John Myers' duties were expanded beyond CRIS at the time of reorganization, and an administrative assistant (Jerry Poulson) hired to assist John with the CRIS duties.

There have been several problems with the CRIS system since the move, including the timeliness of the data and the response time to requests. Specific steps have been taken to alleviate these problems. We are attempting to incorporate 24-hour printout and delivery in our new on-line contract, currently being negotiated. A study at Colorado has concluded that a major factor in the response time is the slowness of the U.S. mail; use of electronic mail can greatly speed up the process. States can access CRIS directly through the on-line system, but they will be billed for the usage and can only obtain the scientific information. Retrieval is no longer limited to key words--almost unlimited words or phrases can be used for retrieval.

We are improving the AD-419 form. We are also holding a series of regional meetings this fall (the Western meeting is the first week of October in Denver) for the key staff people in the states responsible for review and submission of the AD-419 forms. We are investigating methods for automating the data input directly by the Stations.

*Available on request from the Recording Secretary

Dr. Rodney Harrington of Purdue is doing a study for us on our procedures and methods to improve the timeliness and usefulness of the CRIS data. Of course, one of our problems is the quality of the data submitted by the states, which determines its usefulness to other researchers. We hope eventually to have a system where data can be inputted and retrieved directly by terminals in the States.

12.0 Report on SEA - Agricultural Research - T. B. Kinney, Jr.

Kinney provided copies of Deputy Secretary Williams' remarks to the first meeting of the Agricultural Mechanization Task Force, and a draft of the SEA-AR Mission Statement package.*

The reorganization of USDA and the formation of SEA created a new atmosphere and challenges for AR. When I became the Administrator of AR, it became apparent that we needed documents clarifying our role and mission within USDA and vis-a-vis our cooperators. We have spent a considerable amount of time preparing a SEA-AR Mission Statement, still in draft form, and this has been reviewed by ESCOP and the DAL's.

For over a century, the U.S. has had an agricultural research system that has been evolving and changing to respond to new needs. The system has been able to respond because of the partnership arrangement that exists between federal research and state research. As research organizations with limited funds and manpower, we must judiciously plan and administer our programs. A recent article indicated there was serious erosion of the partnership, and that the source of the problem was in Washington, D.C. We want to respond to that kind of criticism, but we need more specific information on the individuals referred to. Another new challenge is devising a strategy for dealing with OMB Circular A-21, which threatens to curtail much of our cooperative research.

Within AR, I shall continue to depend on my top AR staff for budgeting, personnel management, planning, programming, and execution. I am in the final stages of appointing an Associate Administrator and a Deputy Administrator for NPS. We will also be looking closely at the relationship between NPS and line staff and clarifying the role of the NPS. This may eventually include locating some NPS staff at the regional sites.

At this stage, I think we can be only guardedly optimistic about the FY 1981 budget; it will probably be on a continuing resolution until after the election. We have no word about personnel or travel ceilings.

I am optimistic as we both go forward into the future, because I am certain of the dedication and capability of everyone in the audience and your counterparts throughout the country. We need to keep each other well-informed about planned personnel reductions or shifts to maintain good coordination of our programs.

13.0 Subregional Planning Discussions - SAES/AR

13.1 Rocky Mountains (Alaska, Colorado, Montana, Wyoming)

Evans reported that a major item of discussion was the need for better communications among the states and between the states and AR. In addition, a number of issues of interest to the region

- 1- The possibility of establishing a fifth region, namely, the Great Plains, and the advantages and disadvantages of doing so.
- 2- How to enter the policy formulation arena--translate the results of our research into a language and format that can have an impact on policy.
- 3- Range livestock systems as a major resource, and BLM policies pertaining thereto.
- 4- Management problems with overhead and A-21.
- 5- The Great Plains Council and other regional fora.
- 6- Subregional coordination and specialization and the impact of SEA-level reviews and the RRF program.

13.2 California-Hawaii (California, Guam, Hawaii)

Knipling reported that the states agreed at the outset that the only common aspect from a program point of view was the Pacific Ocean. The discussion was more philosophical but did include the following issues, among others:

- 1- The USDA policy on mechanization research.
- 2- The relative roles of federal, state, and private industry research in agriculture.
- 3- Section 406 Tropical Agriculture program and prospects for broadening the base of that program.
- 4- Ways of linking the five-year projection process to the budget development process.

13.3 Pacific Northwest (Idaho, Oregon, Washington)

Miller spoke for the group, noting that the previous foundation of subregional meetings and coordination allowed them to focus on specifics. In particular, they discussed how best to deal with commodity commissions, especially as funding requests go forward. There is a need to coordinate approaches with the commissions and determine how best to have the scientists interact with the commissions. They concluded they needed to share budget information and information on vacancies and redirections more openly and sooner than has been done in the past.

13.4 Arid Southwest (Arizona, Nevada, New Mexico, Utah)

Plowman noted that the major focus of the discussion was improved communication. They agreed to take several steps toward that end: make available to one another printouts on each of the current research projects giving title, objectives, and researchers; circulate research reports within the region; make agricultural statistics available to each other; hold pre-budget submission discussions. Other issues included: A-21; program trade-offs between states; possibility of having Plowman appointed as an advisory member of a major commodity board in Arizona.

Cox made some closing remarks, pointing out that there were several common threads in each of the discussions: the need for better formal and informal communications; sharing information that each administrator needs in order to do his job better, including occasionally ignoring the rules; and concern with OMB Circular A-21.

14.0 Report on Western Regional Council - H C Cox

The organizational meeting of the Council was held in May in San Francisco. Major actions included determining organizational representation on the Council and the Teaching, Extension, and Research Committees; electing officers and setting-up terms of service and a meeting schedule. Each member described the organization he represented. Jack Robins and Charles Smallwood of the Joint Council presented the JC's philosophy on the Regional Councils. The three Committees made reports, and we approved the recommendation that the Western Extension Directors Association serve as the Extension Committee provided additional representatives are included.

15.0 Report on Western Research Committee - C. E. Clark

Herrick distributed the published version of the "Priorities for Food, Forestry, and Agricultural Sciences Research Through 1984: Western Region," the major effort of the Committee during the past year.

Clark reviewed some of the report's recommendations for areas of increased research emphasis in the next five years. The work on the report has provided a forum for the agencies, institutions, and private industry to talk about cooperation and our research problems. It has also provided a base data inventory of our current research programs and drawn our attention to areas for increased emphasis.

The Directors will be receiving a bulk mailing of the reports, and are requested to do a personalized distribution of the reports within their states. Suggested distribution would include state legislators, Congressional representatives, state agricultural groups, university department heads.

After consultation with the RPG Co-chairmen yesterday, we have agreed that our next activity will be to prepare a second report to you on recommended areas for increased emphasis which you can use when you prepare your next five-year projections in spring 1981.

16.0 Committee of Nine Report - C. E. Clark

16.1 Western Region Business

All requests for project revisions and extensions submitted by Western Region were approved. Termination reports were acknowledged for four Western Projects. Committee of Nine expressed concern over W-156, Timber and Forage Interrelationships in Western Montane Forests, in that funds have been allocated by only one Station. It was requested that proposed participation and funding by other stations listed in the project outline be checked into.

16.2 Deadline for Receiving Regional Project Proposals

Proposals should be in the Regional Research Office (USDA-SEA-CR) three weeks prior to the Committee of Nine meeting.

16.3 Off-the-Top Funding of IR-Projects

C/9 reviewed program and budget of each IR-Project and recommended that mandated salary increases at the host SAES be recognized in annual budget adjustments of IR-1, IR-2 and that the operations part of the budget be increased by the same percentage increase as the Hatch appropriations for FY 1981. Budgets for IR-4 and IR-6 were approved as presented. Recommended funding for IR-5 was last year's level plus an increase based on percentage increase in Hatch funds. Starting in FY 1980 the 1890 Colleges share in the support to CRIS (IR-5).

17.0 Research Implementation Committee (RIC) Report - L. W. Dewhirst

The RIC Report is included as Appendix D, pp. 53-59.

18.0 Reports from Federal Cooperators

18.1 SEA-Cooperative Research Report - W. I. Thomas

1. Hatch Manual

The Department's Office of General Counsel has approved the draft revised Hatch Manual subject to resolution of conflicts with SEA's "General Provisions of Grants and Cooperative Agreements". SEA, through appropriate Department offices, has entered into discussions on the personnel costs requirements of OMB Cir. A-21.

2. CR Staffing

- a) Advertisement for a Deputy Administrator, Animal Sciences, is expected by October.
- b) CR has a number of staff scientist vacancies and will be moving ahead with hiring as personnel restrictions permit.
- c) CR intends to continue bringing in IPA scientists. This has been a very worthwhile program and your support is greatly appreciated. SEA's Office of Personnel is now handling negotiations for IPA agreements.

3. Budget

FY 80 - The Congress has eliminated the \$2.5 million under Special Grants for high priority research and has reduced the Competitive Research grants from \$16 to \$15.5 million.
 FY 81 - Action on the FY 81 appropriation is expected after the Democratic National Convention.
 FY 82 - The FY 82 proposal has been developed in SEA with strong inputs from the States. Director Bertrand and his immediate staff presented the proposal to the Secretary and his Budget Planning and Review Board on July 29.

4. Reviews

CR will continue its review activities with emphasis on "special reviews". A special review is one designed to meet the needs

of a department, unit , or program as seen by the local Director or the people in the program. Therefore, strong involvement of the institution is encouraged in defining the objectives, approach, and timing for the reviews. The use of review teams with outside experts will be continued.

5. Pesticide Impact Assessment

Support by the SAES in the National Agricultural Pesticide Impact Assessment Program (NAPIAP) has been strong and is very much appreciated. CR has been attempting to simplify the paperwork in funding the States for NAPIAP, and this year many of the grants were executed as amendments to last year's grants. A new number has been assigned to cover both the 79 and 80 grants and a single CRIS project covers both. The financial management people are still studying the situation and we hope the funds will be looked at as a single account.

6. Special Research Grants for FY 80

<u>Program Area</u>	<u>No. of Grants</u>	<u>Amount</u>
Soybeans	6	485,000
Alcohol	5	485,000
Energy	23	1,843,000
Animal Health	70	6,790,000
For Native Latex, 9 grants are being processed for a total of \$630,000.		

7. Title XIV Review

SEA has been asked to provide the Secretary with recommendations for revision of Title XIV by October 1. Ed Miller is coordinating inputs for CR.

DISCUSSION:

Thomas noted that the high priority regional research grants will probably be put back in the 81 or 82 budgets, but under different guidelines. He also complimented Jordan, Miller and Buchanan for their assistance to him through ESCOP.

Directors discussed the CR special reviews. Lee and others reported that the effectiveness of the reviews would be improved if the review teams' reports could be received sooner. The impact is diminished when the department has to wait 6-8 months for the report. One strategy would be for the review team to stay over an extra day to write up a draft report that would be immediately available to the institution.

18.2 SEA-Agricultural Research - H C Cox

Cox reported that the realignment of areas in the Western Region is now complete. The areas are: Pacific Northwest (OR, WA, ID), Rocky Mountains (AK, CO, MT, WY), Arid Southwest (AZ, NM, NV, UT), and California/Hawaii (CA, GU, HI).

Personnel changes: Dr. J. B. Pate retires August 8. Dr. N. I. James has been appointed Area Director for the Pacific Northwest. He received his B.S. at Colorado State University, and his M.S. and Ph.D. from Rutgers in plant breeding and genetics. He headed the AR sugarcane breeding program in Puerto Rico and Florida, and then went to Beltsville to head the NPS sugar crops program.

18.3 Forest Service Report - D. E. Herrick

Those who hoped 1980 would be a quiet year for the Forest Service, so we would have a lot of time to celebrate our 75th Birthday, have been disappointed. It's an exciting, fast moving period for natural resource agencies. I will highlight a few of the current issues and activities that will keep the Forest Service from spending much time this year in reminiscing about the "good old days."

RARE II

The second Roadless Area Review and Evaluation covered 62 million acres, roughly one-third of the 187 million acres included in the National Forest System. The purpose was to recommend to the President and Congress which of these roadless acres should be added to the Nation's Wilderness System, and which should be released for multiple-use management.

The Forest Service completed its RARE II recommendations in January 1979; they have been debated in Congress--and throughout the country--ever since! Congress has chosen a State-by-State process for legislative action on RARE II proposals, rather than submitting an omnibus bill that would deal with the entire 62 million acres at once. Bills introduced for 14 States are in various stages of action.

The Forest Service is under pressure to sell more timber from its roaded areas. Much of this pressure is linked to declining timber supply on private, industrial forest lands. Planning now underway will determine how much timber the National Forests can, and should, provide in making up the deficit.

RPA

The Forest and Rangeland Renewable Resources Planning Act has also reached a major milestone. The President transmitted the 1980 Assessment and Program documents to the Congress on June 20. We are pleased by the reactions of both Congress and the Administration to these reports.

In transmitting the reports, President Carter stated that he expects his future budget proposals to fall within the recommended program bounds. The President's 1981 budget proposal is identical to the proposed RPA program, and it appears that Congressional action is likely to be at least equally favorable.

The recommended long-range RPA program places greater emphasis on research, relative to action programs, with major attention on finding ways of improving productivity and reducing long-term costs.

Land Management Planning

The RPA is now the foundation for Forest Service program and budget decisions. The vehicle for reaching these decisions is land management planning. Land management planning is now underway at both the Regional and National Forest levels as a basis for (1) effective implementing of the 1980 RPA program and (2) identifying needed adjustments for the 1985 RPA update. Regional plans, include programs for National Forest Systems, State and Private Forestry, and Research will be completed this year. Plans for all 154 National forests are to be completed by 1983.

Fire

Fire management has also drawn considerable attention this past year. Because of the sometimes-beneficial aspects of fire, Forest Service policy provides that some wildfires, under certain prescribed conditions, may be controlled and managed rather than be automatically suppressed. Due to less than precise weather forecasting, imperfect knowledge about fire behavior, and the judgemental decisions involved in implementing this policy, we have had some growing pains. Life was a lot simpler when everyone knew that any unplanned fire should be put out as quickly as possible. But we know our current policy is a better one, and feel we are making good progress toward making it work the way we want it to.

Energy

Energy concerns have affected Forest Service activities in a variety of ways, and the effects will likely become more pronounced. The Synthetic Fuels bill will lead to additional research effort, as will emphasis on biomass for energy. Using wood and wood residues for energy has many obvious benefits that must be explored and quantified, as well as some less-obvious drawbacks: trespass, theft, air pollution and loss of wildlife habitat.

Stringent travel restrictions applied to conserve energy have complicated the conduct of both research and resource management. And we are in the middle of an extensive retro-fitting program to make our facilities more energy-efficient.

Research Direction

Research is facing new and diverse challenges throughout the Forest Service. In the West, these challenges range from determining how to manage streamside vegetation in arid lands to an expanded concept of a Snow and Avalanche Center for both research and hazard warning throughout the mountains. Other major areas of increased research emphasis in the West include: air and water quality, integrated pest management, rangeland improvement, intensified utilization and management of softwoods, rehabilitation of disturbed areas, and anadromous fish.

HOST Program

As a part of our Birthday year activities, we are giving renewed emphasis to the "Service" portion of our name. We feel that our growth in size and technical capability in recent years has made it possible for us to better handle many aspects of our job, but it may also have resulted in some aloofness toward our publics. We are making a concerted effort through a special "Host" program to renew awareness throughout the Forest Service of the need for a good host attitude toward the many publics we serve. So give us another chance. Drop in or give us a call sometime soon!

18.4 ESCS Report - M. L. Cotner

Cotner announced that as of August 16 the agency would have reorganized again, with the title of Economics and Statistics Service. The Farmers Cooperatives Service has been separated out into a separate agency.

Cotner's written report is included as Appendix E, pp. 60-68.

The agency is spending a great deal of time now on the USDA Agriculture Structure Project. This is being augmented with data from the 1978 Census, which indicate that 25% of our farms produce 85% of our output, and the top 50,000 farms produce 33% of our output.

The agency sent a proposal for an economic analysis of pasture and range resource use to Directors for comment in June. The proposal was based on information conveyed at the spring meeting in San Diego of the Range Management Society and others. The proposed project would look at supply and demand aspects, and link the two together. The proposal is for \$850,000, one-third of which would be for cooperative agreements with universities.

The agency has also been doing a great deal of research on the 160-acre limitation issue. The matter is now in the Congress. Church's bill proposes a 1280-acre limitation on the size of operation (not just ownership) in order to receive reclamation water. HR 6520 provides 960 acres of ownership but would allow up to 2400 acres through leasing, for a total of 3360 acres maximum.

WESTERN DIRECTORS BUSINESS MEETING

19.0 Approval of Minutes of March 26-27 Meeting

The Minutes are currently being reviewed by the Chairman and Secretary and have not been distributed to the membership. Approval will have to await the next WDA meeting.

There was discussion about the lack of a designated EPA liaison representative at this time, since both previous representatives are no longer in the San Francisco office. The direct liaison link has been with the head of the Pesticides Branch in the San Francisco office. Kendrick agreed to ask Alford to work with the San Francisco office to have a representative named. If that is not successful, Miller or Buchanan will investigate a link with the research branch of EPA on a national level.

20.0 Director-at-Large Report - M. T. Buchanan

Since our March meeting, my own major assignments and activities have included, among others:

- Chairman, DALs
- Member, ESCOP Policy Subcommittee on Family Farms and Farm Families
- Co-Chairman, INRPC - also prepared a section on regional and national planning for the OTA study
- Co-Chairman, CRIS Committee
- Co-Chairman, Physical Facilities Work Group
- Primary interactor with general farm organizations and other organizations assigned
- Attendee at numerous meetings in Washington area conducted by AAAS, NSF, DOE, NIH and others (Tom Ronningen and I "live" here)
- Participate in numerous activities on behalf of ESCOP, ESCOP Legislative Subcommittee, etc.

Some of my major concerns include:

- Federal budget process and how SAES may interact with and influence it more intelligently and more effectively. I have tried out some ideas on this with our Executive Committee, with Ray and Ed Miller, with Drs. Thomas and Bertrand, with Lowell Lewis, and others.
- Title XIV sunset. The DALs are doing staff work on this.
- OTA Study. The DALs are authors and reviewers of this study, which could have a major impact on agricultural research organization, funding and performance.
- AR mission-policy statement. Actually, this would better be an AR statement alongside CR and SAES statements as parts of systemwide statements.
- Family farms, farm families. A subcommittee of ESCOP with Nolan VanDemark as chairman is developing a "white paper" on this topic.
- Information systems, program structures, etc.
- CRIS.
- The ever-present problem of obtaining recognition within USDA that the SAES exist, that they, collectively, have 60 per cent of the SYs engaged in agricultural research, and that their dispersed, semi-autonomous organization and activities constitute a national resource worthy of enhancement.
- Position of Director of Governmental Affairs for Agriculture, NASULGC. Roles and relationships of the DAL vis-a-vis that office will need to be established. Dale Stansbury has been hired to replace Lowell Lewis.

Appendix F, pp. 69-70, contains a statement on "Collaboration among the DAL's" which elaborates on the collaboration and division of responsibilities among the DAL's.

DISCUSSION:

There was some discussion about the AR mission-policy statement. It was moved and seconded that the Western Directors recommend to the Chairman of ESCOP that ESCOP prepare a mission-policy statement on the SAES to be ready for draft review at the Land Grant meetings.

(Action of WDA: APPROVED)

Buchanan reported that there has been some discussion about contracting out the CRIS operation to some institution such as Penn State in order to get away from some of the federal government personnel regulations.

21.0 Report of Chairman/Report of Executive Committee - D. D. Johnson

The Executive Committee met August 5, 1980, in Monterey, California. Members present were: D. D. Johnson, R. J. Miller, R. A. Young, L. L. Boyd, J. A. Asleson, M. T. Buchanan, J. B. Kendrick (for C. E. Hess). Others attending included J. E. Moak and D. L. Oldenstadt.

21.1 Information Items

1.1 DAL Committee

Johnson appointed a DAL Committee consisting of two Directors, the Past Chairman, and the Chairman, to act as a "board of directors" in interactions with the DAL. The membership is Johnson, Miller, Dewhurst, and Davis.

1.2 Committee of Nine Resolution

At the May meeting of the Committee of Nine, a proposed resolution was introduced recommending SEA utilize the research priorities developed by the SAES planning process in the budget development process. The Committee sent the resolution to the regions for review and comment.

The Executive Committee agreed that such a resolution was not a proper sphere of concern or activity for the C/9.

Buchanan reported that the North Central Directors, at their meeting two weeks ago, passed a unanimous resolution to suspend participation in the regional and national planning process because (1) they disapprove of the membership and size of the National Research Planning Committee (NRPC), (2) there is a lack of direct utilization in the development of the research budget within USDA of research priorities established in the state planning process, and (3) there is a lack of understanding of the role and function and probable duplication of effort by the regional planning councils assuming that the regional research, extension, and teaching planning committees function properly and report directly to their respective national planning committees. This will undoubtedly be a topic of discussion at the next Joint Council Executive Committee meeting.

1.3 Revision of Experiment Station By-Laws

The Executive Committee reviewed the proposed changes in the Section By-Laws. The major change is to add a clause disassociating the National Association from the Regional Associations for purposes of accountability of their regionally-collected funds. Copies of the proposed revision will be distributed to Section members prior to the Land Grant meetings.

The Executive Committee recommends the Western Directors approve the proposed Section By-Laws when they are introduced at Land Grant.

1.4 Off-the-top Allocations for IR- Projects

At the Spring 1980 WDA meeting, the Directors approved a motion that allocations to the IR- projects be increased by no more than the percentage increase nationally in Hatch funds. The C/9, however, adopted a policy of matching the mandated salary increases in the affected states, and increasing operating funds by no more than the percentage increase nationally in Hatch funds.

DISCUSSION:

It was moved and seconded that the Chairman write the Chairman of the C/9 requesting projects IR-1 and IR-2 prepare detailed budget requests for FY 82 for review by the Western Directors at their April 1-3 meeting. The budget requests should include analyses of a fee-for-service structure under several assumptions --a full cost structure, and several alternative partial cost structures--with attention given to the costs of collection, fees that would have to be charged, estimated decline in requests for materials, and the estimated income that could be generated.

(Action of WDA: APPROVED)

1.5 Audit of Montana Funds

Asleson was authorized to pay for an audit of the Montana account from the WDA Special Fund. He distributed the audit, which was generally favorable. It did note that some special payments "which were over and above the normal course of business" were not previously expressly authorized in the Minutes, although authorized by correspondence, and this should be corrected in the future. Montana offered to continue to act as Treasurer after Asleson's retirement.

1.6 AR Policy Statement

Buchanan reported on ESCOP interactions with SEA and SEA-AR on the development of an AR policy statement. A second draft of the statement has now been prepared. The motivation seems to be a desire to more clearly delineate the responsibilities of USDA research agencies vis-a-vis the SAES.

1.7 FY 1982 and 1983 Budgets

Buchanan reported on activities related to budget development. The WDA ESCOP representative will be presenting an ESCOP recommendation that the Stations increase their commitment of time in the budget development process.

1.8 Revision of Title XIV

Buchanan reported on the activities of the DALs and ESCOP with respect to drafting the revision of Title XIV. As soon as the current draft has been approved by the ESCOP subcommittee, either Buchanan or ESCOP representative Miller will distribute copies to the Western Directors for review and comment.

2.0 Action Items

2.1 Revision of WDA By-Laws

It was proposed that the terms of service of WDA officers and representatives be changed from a Land Grant-to-Land Grant basis to a calendar year term. This would avoid confusion and bring us into conformance with the Joint Council, Regional Councils, and C/9.

The Executive Committee recommends that the following sentence be deleted from the current WDA By-Laws: "The officers of the WDA shall be a Chairman, Chairman-Elect, Past Chairman, Secretary and a Treasurer, each for a one (1) year term that begins at the conclusion of the annual meeting of the National Association each year and ends at the same time, the following year."

The Executive Committee further recommends the inclusion of the following sentence in the WDA By-Laws: "The officers of the WDA shall be a Chairman, Chairman-Elect, Past Chairman, Secretary and a Treasurer, each for a one (1) year term that begins January 1 and concludes the following December 31."

(Action of WDA: APPROVED)

In order to effect an immediate change in the term of service, The Executive Committee further recommends that for this change only the WDA waive the requirement that By-Laws changes be sent to the membership a month in advance of a meeting.

(Action of WDA: APPROVED)

2.2 IR-6

The Executive Committee noted that the IR-6 regional project outline has been revised with the approval of the IR-6 Administrative Committee, and the revision approved by the C/9.

The Executive Committee recommends the WDA Chairman be requested to write the Chairman of the C/9 stating we believe the revised project outline should be returned to each Regional Association for review through the regular regional research process. Copies of this letter should be sent to the Regional Association Chairmen, the DALs, and the IR-6 Administrative Committee.

The Executive Committee further recommends that RIC review the revised project outline and make recommendations on its acceptance at the Land Grant meeting.

(Action of WDA: APPROVED)

2.3 Reapportionment of DAL and WDA Special Fund Assessments

The current method of assessing the states' contributions to the DAL and WDA Special Fund accounts is through a percentage distribution established in 1966. When Guam entered the Western Association the percentage distribution was not changed, and Guam was assessed at the flat rate of \$500 per year. With the addition of Alaska to the region, it seems appropriate to revise the distribution formula. Treasurer Asleson reviewed the matter, and provided information on the current distribution of Hatch and RRF funds regionally (included as Appendix G, pp. 71-73.

The Executive Committee recommends that State assessments for the DAL and WDA Special Fund accounts be based on the previous year's percentage distribution of base RRF funds within the Region. For FY 1981, the percentage assessments based on FY 1980 distribution of base RRF funds is: Alaska 1.60%, Arizona 8.46%, California 17.08%, Colorado 10.36%, Guam 1.37%, Hawaii 4.29%, Idaho 6.67%, Montana 7.47%, Nevada 4.10%, New Mexico 4.50%, Oregon 10.58%, Utah 7.70%, Washington 9.86%, Wyoming 5.96%. The approved budget for the DAL is \$102,678; the assessments will be reduced by the amount of funds remaining in the Montana and California accounts.

(Action of WDA: APPROVED)

DISCUSSION:

A question was raised about why the percentage distribution of RRF funds within the Region changes from year-to-year. Harris explained that originally, funds were assigned directly to projects and the technical committees decided how they would be apportioned to states. Subsequently, based on the historical level of participation by states, target values were assigned to each state. Increases were distributed proportionally. In 1972 the C/9 adopted a policy of assigning proportionally larger shares of funds to states with greater levels of activity in "earmarked" research areas.

OFFICE OF THE WESTERN DIRECTOR-AT-LARGE
BUDGETS AND EXPENDITURES
JULY 1, 1979 - JUNE 30, 1980

Final Figures

	FY 1980 BUDGET \$	CALIFORNIA \$	FY 1980 EXPENDITURES MONTANA \$	TOTAL \$	FY 1981 BUDGET \$
<u>Funds Available</u>					
Balance forward		24,830.49	14,544.54		
Interest income			5,652.35		
Assess. from States		73,852.00	81,000.00		
Less: disburse- ments to UCB			(73,852.00)		
Escrow account			6,000.00		
		<u>98,682.49</u>	<u>33,344.89</u>	<u>132,027.38</u>	
<u>Expenditure Items</u>					
Salaries:					
DAL	47,500	(47,499.96)		(47,499.96)	51,716
Asst. Ad. Anlyst	7,047	(8,080.38)		(8,080.38)	8,850
Benefits	10,450	(11,235.15)		(11,235.15)	11,400
Travel:					
Travel expense	6,000	(8,253.55)		(8,253.55)	10,500
Dislocation allow.	3,000		(3,000.00)	(3,000.00)	3,000
(June 1979) LT	0		(378.00)	(378.00)	0
per diem					
Office rental in DC	8,600		(8,446.56)	(8,446.56)	8,650
Equipment	0	(270.04)		(270.04)	2,812
Furniture	0	(515.31)		(515.31)	0
Office expenses:					
Duplication	1,500	(1,252.62)		(1,252.62)	1,600
Mailing	1,000	(607.72)		(607.72)	800
Telephone	1,500	(1,362.68)		(1,362.68)	1,500
Office supplies	700	(712.80)		(712.80)	800
Miscellaneous items	300	(41.32)		(41.32)	150
Library materials	200	(232.36)		(232.36)	200
Equipment maint.	200	(244.84)		(244.84)	250
Memberships	455	(435.00)		(435.00)	450
Unexpended balance	12,000	0		0	
for special needs					
FY 79 Ad.An. overdraft	0	(2,611.00)		(2,611.00)	0
FY 80 Ad. An. overdraft	0	(3,001.75)		(3,001.75)	0
TOTALS	100,452	86,356.48	11,824.56	98,181.04	102,678.00
Balance to carry forward		12,326.01	21,520.33	33,846.34	

Page 19 shows the expenditures for the DAL account during FY 1980.

2.4 Future Meetings

The Western Directors will meet with Western Extension Directors in Berkeley, April 1, 1981. The WDA meeting will extend from April 1-3.

The Chairman was authorized to explore with Alaska the possibility of accepting their invitation for a summer 1982 meeting rather than a spring meeting in 1982. The meeting would probably be a joint one with SEA-AR. It may be necessary for the Executive Committee and RIC to meet in the spring of 1982.

It may also be necessary for RIC to meet prior to the WDA spring 1981 meeting (perhaps in February with NISARC), in order to meet the C/9 deadline for receipt of new projects, etc.

The Executive Committee recommends that a full meeting of the WDA be held at Land Grant, with at least one representative per state. The Executive Committee further agreed that the presence of the Recording Secretary would not be required at the meeting.

(Action of WDA: APPROVED)

Although the WDA passed a motion at the March 1980 meeting to suspend further summer meetings of the Association, the Executive Committee recommends that the WDA meet in Alaska in the summer of 1981, since it will not be possible to hold a spring meeting in Alaska. The policy adopted at the spring 1980 meeting, however, would remain in effect.

(Action of WDA: APPROVED)

2.5 Nominations

The Executive Committee recommends the following list of nominations for officers and representatives of the WDA:

<u>Office</u>	<u>Term Ends</u>	<u>Nominee</u>
Chairman	12/31/81	D. D. Johnson (CO)
Chairman-Elect	12/31/81	D.W. Bohmont (NV)
Secretary	12/31/81	R.E. Witters (OR)
Treasurer	indefinite	J.R. Welsh (MT)
At-large Exec. Comm.	12/31/81	J.B. Kendrick, Jr. (CA)
At-large Exec. Comm.	12/31/81	J.S. Robins (WA)
ESCOP	11/82	D.D. Johnson (CO)
ESCOP	11/83	L.N. Lewis (CA)
ESCOP Alternate	11/81	C.E. Clark (UT)
ESCOP Leg. Subcomm.	11/83	L.N. Lewis (CA)
ESCOP Home Ec. Subcomm.	11/84	H.F. McHugh (CO)

<u>Office</u>	<u>Term Ends</u>	<u>Nominee</u>
RIC	12/31/84	L.L. Boyd (WA)
Committee of Nine	12/31/83	L.W. Dewhirst (AZ)
C/9 Alternate	12/31/81	R.A. Young (NV)
Bd. of Directors, WRDC	12/31/82	D.J. Matthews (UT)
RPG-1 Member	12/31/83	W.R. Butcher (WA)
RPG-2 Member	12/31/83	C.R. Hatch (ID)
RPG-3 Co-chairman	12/31/84	W.H. Foote (OR)
RPG-4 Co-chairman	12/31/83	H.J. Tuma (WY)
RPG-5 Member	12/31/83	R.C. Youmans (OR)
RPG-6 Co-chairman	12/31/83	R.S. Firch (AZ)

(Action of WDA: APPROVED)

A complete list of WDA officers and representatives for 1981 is included as Appendix H, pp. 74-75.

22.0 ESCAP Report - J. P. Jordan (and R.J. Miller, M.T. Buchanan)

1. ESCOP met at Lexington, Kentucky, April 28-29, 1980, hosted by the University of Kentucky. The Interim Committee of ESCOP met at Prairie View, Texas, 24-25 June, 1980, hosted by Prairie View A&M University.
2. The revision of Title XIV of the Food and Agriculture Act of 1977 is one of the primary topics of concern to ESCOP this year. The timetable for the activity is:

- Review ideas with House Agriculture Committee staff, May 27, 1980 - done
- Retreat at Clemson, SC, July 7-9, 1980 - done
- Individual writing and rewriting, July 10, 1980 - ?
- Review with ESCOP Committee and SEA representatives, August, 1980
- Share with Division of Agriculture, NASULGC committees, August, 1980
- Review with House Committee Staff, September, 1980
- ESCOP concurrence, October 29-30, 1980
- Land-grant concurrence, November, 1980
- Wampler submits new bill on first day of new session, January 1981

ECOP and RICOP are working on similar calendars and the program will be well fitted to that of the Division of Agriculture's Committee for the revision of Title XIV. The presence of Dale Stansbury as the Director of Government Relations for Agriculture at NASULGC should be a big help to us in this endeavor. The Joint Council meeting scheduled for October 14-16 will have this topic as a major item of consideration.

3. The ISEC (International Science and Education Council) has formed a Technical Assistance Committee to develop improved mechanisms whereby USDA and the universities can cooperate in the partnership mode as well as resolve differences with AID. Specific aspects covered:

1. USDA has ceilings on hiring for fulfilling contracts. Also may not have needed manpower.
 2. Overhead costs are legitimate aspects of budgets. Universities figure overhead as a percentage of salaries and wages; USDA has 25 percent of budget (total) as overhead.
 3. Cooperative agreements are excellent mechanisms for partnership arrangements but may not be suitable for ISEC programs.
 4. It is possible for USDA to be the principal contractor and have subcontracts with SAES or the reverse to be true.
 5. The Director of the Agricultural Experiment Station should be involved in planning for his scientists and likely the ones involved.
 6. Although there is a need for government to government relationships, university to university relationships also develop. These are often scientists and former students to their former professors. Communications must be established at all levels early, to obtain the best understanding of the opportunities available. Likewise, to develop the most realistic program of research.
 7. Mechanisms need to be developed whereby excessive bidding (competition) can be avoided as that is non-productive. We should develop guidelines to follow. In some cases, consortiums may be desirable over individual specific universities --- each should operate on their own merits.
-
4. The Land-grant meetings are at the Peach Tree Plaza Hotel in Atlanta, Georgia; it is recommended that Experiment Station Directors stay across the street at the Atlanta American Motor Hotel. DAL Jim Halpin has arranged for us to stay at \$38 per night. This will also be the site of the Experiment Station banquet.
 5. The NISARC, meeting in October 1980, will address the question of whether NISARC should be expanded to include the Cooperative Extension Service interests as well as the Experiment Station interests. Some industry spokesmen have cautioned that perhaps NISARC can do a good job of one level of interaction and that expanding it would bring its impact value markedly down. Others indicate that the more cooperation there is between the Extension Service and the Experiment Station, the better off we will be. In any case it will be a topic discussed at the fall meeting.
 6. The September Interim Committee meeting of ESCOP will address a document received recently entitled "New Initiatives in Economics."
 7. With respect to assignments, Dr. Bernie Liska, new Dean at Purdue, will remain chairman of the legislative subcommittee through the land-grant meetings this fall; Ray Miller will assume the position at that time. It was pointed out that Director Miller has picked up the additional title of Dean at Idaho.

8. ESCOP has decided that in addition to reacting to situations, it ought to take a leadership role at least on appropriate topics. Thus it is launching a series of "White Papers" that are position papers on particular issues. The first one focuses on the family farm issue, including small farms. Lee Day of Cornell University is chairman, Hal Carter of California, Ron Powers of Iowa State University, Will Cochran of the University of Minnesota and Luther Tweeton of Oklahoma State University are on the drafting committee for the white paper. DAL Mark T. Buchanan has also been a participant. The focus of the white paper will be to put greater substance to the consideration of how much research is size-neutral versus how much is small farm oriented and how much is large, corporate farm oriented. The draft report is targeted for October, but may take until land-grant meetings for the work to be completed.

A second study of the impacts of the State Agricultural Experiment Stations on manpower in agriculture and agricultural research is under consideration. The Departments of Rural Sociology and Education at Cornell University are developing some of the initial plans for this study.

9. The Agricultural Mechanization Task Force which is addressing the question of criteria and guidelines to be used to ensure that untoward effects of mechanization research on manpower hiring in agriculture has had its initial meeting. Major points of emphasis included the fact that it is not intended that such guidelines be obligatory in any way to the State Agricultural Experiment Stations, even regarding Hatch and other federal funds, and that the USDA does not intend to stop doing mechanization research. A full report of the meeting is contained in a memorandum addressed to the ESCOP membership dated August 1, 1980, prepared by Director Jordan with copies sent to all Experiment Station Directors in the United States. An update of the California lawsuit related to mechanization research was presented by Director J. B. Kendrick, Jr.
10. ESCOP has reviewed in detail the proposed bylaw changes for the Experiment Station section of the Division of Agriculture, NASULGC. It recommends the latest version of the bylaws for membership support at the land-grant meetings in November 1980.
11. The ESCOP Interim Committee has accepted recommendations coming from ESCOP Legislative Subcommittee chairman-elect Ray Miller regarding the preparation and calendar of efforts for the FY 1983 budget preparation. In doing so, the ESCOP Interim Committee has referred the recommendation to the regions for their examination with the request that they vote on concurrence. Briefly the proposal involves the following:
 - still earlier identification by the Legislative Subcommittee in consultation with SEA-CR of areas to support, the funding source to be proposed for each, etc.
 - identification of Associate/Assistant Directors and possibly others who have expertise in the high priority areas chosen.
 - obtain the services of the persons to help prepare the justification statements who would later be asked to spend up to two months at Beltsville as participants in the adversarial activities that go on there toward the finalization of the SEA budget.

- obtain the services of one senior Director who would be available six months to work with SEA-CR and the DALs; this director would lead the state-side SAES activities at Beltsville.
- the home SAES for the persons chosen would bear the salary costs; SEA would cover travel and per diems.

In principle the proposal is that the State Agricultural Experiment Stations take a more active role in budget development by way of continuing to provide salary for persons chosen to participate in activities related to the development of the SEA-CR budget requests for the U. S. Department of Agriculture.

23.0 ESCOP Legislative Subcommittee - R. J. Miller

Miller commented on item 11 in the ESCOP Report (above). It would be desirable to have SAES people not only on the Decision Unit teams, but also on the cross-cut analysis teams. The most critical part of the appropriations process is getting a good report out of USDA.

DISCUSSION:

If ESCOP could let the states know what information is needed for budget development and presentation early enough, the states could provide better quality information. Currently, requests are received too late for the states to respond satisfactorily.

It was the consensus of the WDA that the Directors would be willing to send people to Washington to work on the budget if ESCOP deems it necessary.

24.0 Reports from WDA Liaison Representatives

24.1 Western Home Economics Research Administrators (WHERA) - B. E. Hawthorne

Interstate Doctoral Program

A major effort of the past year has been renewed development of the interstate doctoral program in home economics, supported by strong encouragement from WICHE staff. At its March 17-18 meeting held in Tucson, WHERA reviewed an ad hoc committee's proposal to strengthen graduate programs in home economics and approved in principle the concept of a consortium in the western region to develop a model of an interstate doctoral program. The Steering Committee is composed of Robert Rice (Chairman of WHERA), chairman; Margaret Hard, chairman of Need subcommittee; Lois Hughes, chairman of Structure subcommittee; Donna Beth Downer, chairman of Programs subcommittee; Margaret Briggs, chairman of Finance subcommittee; and Tom DeRouen and Richard Jonsen, WICHE. A work session of the Steering Committee was held in June during the annual meeting of the American Home Economics Association. Individual universities are laying groundwork as efforts of the subcommittees progress and WICHE lends support.

Input to Regional Research Planning Efforts

WHERA continues to have a significant role in contributing to the regional research planning process by identifying areas of research needs to research planning groups, particularly RPGs 5A, 5B and 6, providing substantive reviews and

priority recommendations for related regional proposals, seeking enhanced support of priority research projects and monitoring progress of related regional coordinating committees and projects.

New Initiatives for Home Economics

The "New Initiatives for Home Economics" national endeavor has made excellent progress since the first meeting of the State/Federal Steering Committee (which was appointed by Anson Bertrand, Director of SEA) was held in September, 1979. Dr. Tom Ronningen represents ESCOP. The Steering Committee has reviewed recent national studies of home economics program needs and priorities in research, extension, and teaching; it has compiled and reviewed issues which have been raised by the general public and Congress; it drafted a document proposing new thrusts; and four regional meetings were held for assessment and input by professional, administrative and user groups. Proposed "new initiatives" for strengthening home economics research, extension, and teaching to meet national needs and which could have a measurable impact on national goals within five to ten years are presented under five major problem headings: Family Economics Stability and Security; Energy and Environment; Food, Nutrition, and Health; Family Strengths and Social Environment; and Systems and Methodologies for Generating, Disseminating, and Evaluating Information. Completion of the final report, "National Plan for New Initiatives for Home Economics Research, Extension and Higher Education" is scheduled for completion by September, 1980, for review by the Joint Council and Users Advisory Board meetings in October.

Home Economics' Recommendations for Revisions to Title XIV, PL 95-113

The national "Coalition of Home Economics Groups" is sharing efforts in proposing revisions to Title XIV. The Home Economics Research Subcommittee/ESCOP has primary responsibility for recommending changes in the legislation to strengthen support of research programs "to improve the quality of life for the American family". The attached two sheets*, "Basic Assumptions for Reviewing Title XIV of PL 95-113" and "Points to bear in mind in proposing revisions for PL 95-113 (Title XIV)" contain the principal considerations being addressed in the Subtitle being drafted. We seek your support for revisions in Title XIV to strengthen research in all areas of home economics. Your comments and suggestions will be welcome and appreciated.

Approval of New Representative from Western Region to Home Economics Research Subcommittee/ESCOP

At the regular meeting of the Western Home Economics Research Administrators March 17-18, Helen McHugh was nominated to be the western regional home economics research administrator on the Home Economics Research Subcommittee of ESCOP for the term 1980-1984. Formal approval by the Western Association of Agricultural Experiment Station Directors is solicited.

It has been a privilege for me to serve as the western region representative on the Home Economics Research Subcommittee for the past six years, completing a two year term for my predecessor, Ruth Hall, and a regular four year term. I have appreciated, in the capacity of this position, serving as liaison from WHERA to WDA and as a member of the Western Research Committee. I will miss their associations. They have been enriching and rewarding.

* Available on request from the Recording Secretary.

24.2 Assoc. of State College and Univ. Forestry Research Organizations
(ASCUFRO) - R. M. Kallander

Dr. Fred Knight, President of ASCUFRO, sends his greetings and best wishes for a successful meeting.

During the past year ASCUFRO, through its officers and members, has participated in a wide variety of activities in support of Agriculture, Forestry, and related natural resources. Cooperation with the Science and Education Administration and the Forest Service has been very good in research program planning and coordination of research effort to strengthen useful research results by both the Forest Service and State Universities.

Dean Richard A. Skok, College of Forestry, University of Minnesota and Vice President of ASCUFRO, was appointed a member of the Joint Council on Food and Agricultural Sciences. He is currently serving as Chairman of the Steering Committee for the 1980 Joint Council Annual Report. Dr. Skok will succeed to the Presidency of ASCUFRO on January 1, 1981.

Director Donald P. Duncan, School of Forestry, Fisheries, and Wildlife, University of Missouri and past President of ASCUFRO is serving on the Division of Agriculture Committee concerned with Federal legislation. Drs. Duncan, Knight, and Skok have teamed up to provide recommendations for amendment to Title XIV of the National Agricultural Research, Extension, and Teaching Policy Act of 1977. I understand the Committee will be meeting in early August to review proposed amendments.

You are probably aware of the fact that in 1978 the McIntire-Stennis Cooperative Forestry Research Advisory Committee inquired about the status of basic research information needed to help solve forestry problems. This is the statutory committee composed of public forestry agency heads and leaders in forest industry. The inquiry resulted in the establishment of a committee to review the status of basic research as it relates to problem solving in forestry. We expect the report to be published later this year. It should be useful in pointing out the strengths and weaknesses of forestry in this important area.

Research program planning is still a major interest and concern of ASCUFRO. We work within the planning system developed by the Joint Council through the national and regional PPC's and RPG's for Forest Resources. In its April meeting the ASCUFRO Executive Committee established a research planning group composed of the Vice President of ASCUFRO as Chairman and one member of the Executive Committee from each of the four regions. The purpose of the group is not to usurp prerogatives of RPG-2's, but to provide some early discussions of what broadly constitutes a five year program of research. We always find ourselves frantically putting together information by regions without having had an opportunity to thoroughly examine the national coordination that is needed. This group may be helpful in smoothing out some of the rough spots. The Committee will have its initial meeting later this month.

SEA, the Forest Service, and ASCUFRO are again working on a joint budget display. When first proposed, some of the areas emphasized in the joint budget display were eastern hardwoods, basic research, wood for energy, and range. We understand that Dr. Bertrand made a strong plea for support of forestry research. Work on the FY '82 McIntire-Stennis budget is also underway. The final budget request will again be displayed jointly with the Forest Service. As the fiscal situation has tightened,

this has become extremely important. This is particularly true where the Forest Service budget request goes before Interior Subcommittees on Appropriations and the McIntire-Stennis appropriation goes before Agriculture Subcommittees.

Regional Co-Chairmen of RPG-2 will meet in Spokane on October 8, 1980 following the Annual meeting of ASCUFRO and the Annual National Convention of the Society of American Foresters. Consideration will be given to regional plans for the next five years in relation to the Resources Planning Act during this meeting of NPG-2. Preliminary work of the ASCUFRO planning group should be helpful in making this a productive meeting.

We're still urging that an initial appropriation be made for the Renewable Resources Extension Act. So far, no luck, but we intend to keep trying. The limited forestry extension effort going on in the West is paying big dividends. Strengthened programs nationally can help get research results into use and aid in meeting national and world needs for wood products.

In recent months ASCUFRO has been involved in preparing a brochure briefly explaining activities of the organization, who are members, broad areas of forestry research, and what is being done to further the research effort. The brochure should be ready in October. We will see that copies are sent to all Agricultural Experiment Station Directors.

24.3 Western Deans and Directors of Veterinary Medicine - W. G. Huber

It appears that the chance of obtaining animal health formula funds provided by PL 95-113, Section 1433, for FY 1980-81 is questionable. This lack of support for animal health research after only two fiscal years of funding will obviate the momentum initially generated by the program. Unfortunately, multidisciplinary programs supported by formula funds to study animal diseases of major economic importance will be terminated by October 1980 unless other resources are made available. Traditional animal disease research support, allocated by the usual mono-disciplinary single department arrangement, generally has not kept pace with the available level of scientific sophistication and has not received the benefits of viable and energetic peer review systems. Formula funds provided an opportunity to upgrade federally supported animal disease research to the benefit of food producing animals, and with the cessation of formula funds this opportunity is lost. Hopefully, a priority arrangement for special funds will be given to existing projects funded by 1433 if all other features of the proposals are equal.

During the past year, the first Western Regional Veterinary Medicine-Food Animal Research Conference was held. Western colleges of veterinary medicine and western departments of veterinary science participated. The second meeting is scheduled during January 1980 in Fort Collins, CO. These meetings have been initiated to provide opportunities for western animal disease research workers and veterinary clinicians to discuss disease health delivery problems, to foster collaboration, and to avoid duplicate and redundant experimentation.

The Veterinary Medicine Commission is activated and is providing input to the draft of new legislation to modify PL 95-113. A member of the

commission and Council of Deans (Veterinary Medicine) is serving on the Task Force of the NASULGC Division of Agriculture Committee chaired by Dale Zinn.

DISCUSSION:

It was moved and seconded, that the WDA go on record as recommending that if formula funds under Section 1433, PL 95-113, are not included in the FY 1981 appropriations bill, the National Advisory Board for Animal Health Research be requested to give priority to projects already funded under the formula program in the awarding of the special grants funds for FY 1981, all other factors being equal.

After discussion, it was agreed that this action could await further information on the appropriations bill at Land-Grant. Huber will supply the appropriate wording at that time.

(Action of WDA: TABLED)

TOUR

The meeting adjourned for the day at 2:45 and Directors were conducted on a tour of vineyards in the Gonzales, California area by Mr. Gerald B. McFarland of McFarland Management Company.

25.0 Resolutions - V. H. Gledhill

The Resolutions Committee consisted of Gledhill (Chairman) and C. C. Kaltenbach.

The Western Directors unanimously passed the following Resolutions:

Resolution 1

WHEREAS, Dr. Harold F. Heady, Assistant Vice President and Associate Director of the Agricultural Experiment Station, University of California, elected to return to his professional field of range management after a period of dedicated service as an administrator, and

WHEREAS, Dr. Heady has served the interests of the Western Association of Agricultural Experiment Station Directors as an officer of the Association and an Administrative Adviser to a regional research project,

NOW THEREFORE BE IT RESOLVED, that the Western Association of Agricultural Experiment Station Directors and Western SEA-AR administrators recognize with sincere appreciation his contributions to the Association and to Western agriculture and wish him success and enjoyment in his continued activities.

Resolution 2

WHEREAS, Dr. Milton N. Schroth, Assistant Director of the Agricultural Experiment Station, University of California, elected to return to his professional field as a professor of plant pathology, following a period of dedicated service as an administrator, and

WHEREAS, Dr. Schroth has served the interests of the Western Association of Agricultural Experiment Station Directors as an Administrative Adviser to regional research projects,

NOW THEREFORE BE IT RESOLVED, that the Western Association of Agricultural Experiment Station Directors and Western SEA-AR administrators recognize with sincere appreciation his contributions to the Association and to Western agriculture and wish him success and enjoyment in his continued activities.

Resolution 3

WHEREAS, Dr. William R. "Bill" Furtick, Director of the Agricultural Experiment Station and Dean of the College of Tropical Agriculture, University of Hawaii, has elected to return to instruction in the College, and

WHEREAS, Dr. Furtick has served diligently as an officer of the Western Association of Agricultural Experiment Station Directors and an Administrative Adviser to a regional research project, and

WHEREAS, Dr. Furtick worked diligently for the advancement and benefit of worldwide agriculture and more specifically for agriculture in the Western United States,

NOW THEREFORE BE IT RESOLVED, that the Western Association of Agricultural Experiment Station Directors and Western SEA-AR administrators recognize with sincere appreciation his contributions to the Association and Western agriculture and wish him success, enjoyment, and satisfaction in his new activities.

Resolution 4

WHEREAS, Dr. James B. Pate, Acting Area Director of the Arizona-New Mexico area of SEA-AR, served a long and dedicated period of service to the benefit of agriculture in the United States and specifically to the West as a fiber breeder and as an administrator, and

WHEREAS, Dr. Pate, after dedicating his life to service and an effort to benefit and maintain the integrity of Federal-State relationships, has elected to retire from Federal service, and

WHEREAS, Dr. Pate has opted to enjoy the "fruits of his labor" on his farm in South Carolina and in travel,

NOW THEREFORE BE IT RESOLVED, that the Western Association of Agricultural Experiment Station Directors and Western SEA-AR administrators recognize with sincere appreciation his contributions and dedicated efforts to further agricultural research in the Western States, and wish him and Mrs. Pate a long, enjoyable, and rewarding retirement.

Resolution 5

WHEREAS, Dr. Betty E. Hawthorne has, for the past six years, represented home economics research in the Western Region as liaison to the Western Association of Agricultural Experiment Station Directors, and

WHEREAS, during this time, Dr. Hawthorne has served as home economics representative to the ESCOP Home Economics Subcommittee and the Western Regional Planning Committee, and

WHEREAS, Dr. Hawthorne has shared generously her professional views and perceptions with the Western Directors Association, has assumed more than her fair share of assignments therewith, and has been a cordial associate,

NOW THEREFORE BE IT RESOLVED, that the Western Association of Agricultural Experiment Station Directors and Western SEA-AR administrators express their appreciation to Dr. Betty E. Hawthorne for her cordial association during six years of sound professional service as home economics liaison, and extend to her their best wishes for the future.

Resolution 6

WHEREAS, Dr. Roger L. Caldwell,
Dr. Richard A. Farley,
Dr. Terry B. Kinney, Jr.,
Dr. Walter I. Thomas,
Dr. David W. Krogmann,
and Dr. John L. Baritelle

have travelled long distances to enrich our knowledge of the "state-of-the-art" of agricultural research administration and Washington politics, and

WHEREAS, their contributions to this meeting have benefited the relationships between State, Federal, and State Agricultural Experiment Station programs,

NOW THEREFORE BE IT RESOLVED, that the Western Association of Agricultural Experiment Station Directors and Western SEA-AR administrators extend to them our sincere thanks and appreciation for their attendance and efforts.

Resolution 7

WHEREAS, Congressman George E. Brown, Jr. of the 36th Congressional District of the State of California, took time from his busy schedule to attend the joint meeting of the Western Association of Agricultural Experiment Station Directors and Western SEA-AR administrators to discuss science and research, and

WHEREAS, Congressman Brown's contribution to the meeting furthered the cause of Western agriculture and the partnership between the Federal and State agricultural research performers,

NOW THEREFORE BE IT RESOLVED, that the Western Association of Agricultural Experiment Station Directors and Western SEA-AR administrators extend their sincere thanks and appreciation for his attendance and contribution to their meeting.

Resolution 8

WHEREAS, the members and guests of the joint meeting of the Western Association of Agricultural Experiment Station Directors and Western

SEA-AR administrators have had pleasant, comfortable surroundings and enjoyable weather in which to hold a successful meeting, and

WHEREAS, our SEA-AR hosts have been most diligent and efficient in arranging for meals, lodging, and refreshment and have acquainted us with the "nectar of the vine" by sight, by thigh, by nose and by taste, to contribute to our cultural uplift, and have in general contributed greatly to the achievement and satisfaction of members and guests at this meeting,

NOW THEREFORE BE IT RESOLVED, that the Western Association of Agricultural Experiment Station Directors expresses due appreciation and much thanks to Jill Moak, Fred Strauch, H C Cox and their staffs for their hospitality and efforts on behalf of this successful meeting.

BE IT FURTHER RESOLVED that a letter of appreciation be forwarded to Mr. Gerald B. McFarland and his staff for their kind hospitality and generosity which provided an enjoyable conclusion to a profitable day.

26.0 Other Business

26.1 Western Rural Development Center - R. C. Youmans

Since no representatives of the Oregon Station were present, Dr. Youmans prepared a written report on the activities of the WRDC, which is included as Appendix I, pp. 76-80.

27.0 Report on SEA - Competitive Research Grants Office - David W. Krogmann, Chief, Competitive Research Grants Office

Dr. Krogmann reviewed the evolution of the competitive grants program, beginning with activities in the plant sciences disciplines in the 1960's. Research funding from NSF for basic research in such areas as photosynthesis, genetic mechanisms, biological stress, etc., was curtailed during the Vietnam War, and another mechanism was sought to provide the kind of federal resources that were needed for such research.

The program has now finished its third cycle of granting activities, at a level of \$15 million the first two years, and \$15.5 million in 1980. The operating procedures are based on the NSF and NIH patterns, with a general call for applications and selection based on evaluation by peer review panels utilizing outside scientists. They hope to be able in the future to make some grants in time for spring planting. However, most grants are currently made in July and August.

Because the awards are generally made for two years, there is a rigorous monitoring system in effect since grantees must compete for additional funds against new applicants. We had thought initially that CRIS reporting in December would be sufficient, but we are required to report at the end of each year of grant-funded activities, which means most of the projects are required to report in the summer.

We are also monitoring the projects by visiting the laboratories of the recipients for direct observation. We hope within the future to have an evaluation of the program conducted to see if the research funded meshes with the in-house SEA programs.

- \$97 million worth of applications were received
- 15% of funds requested were funded
- 25% of applicants were funded
- 55-60% of funded applicants were from AES
- 8-10% of awards to public universities (non-Land Grant)
- 10% awards to private universities
- Small percentage to Federal Laboratories (Beltsville, etc.)
- Few to profit-making organizations (two grants)
- 20% of awardees were new scientists just getting started

A major concern for the program is the overhead policies of the institutions. This is difficult to combat since overhead is supported by a powerful group of people--the university presidents. For the foreseeable future, overhead is inevitable.

28.0 Toward the Year 2000: The Challenge for Agricultural Research -
 Congressman George E. Brown, Jr., Chairman of House Subcommittee on
 Science, Research and Technology, Member of House Committee on Agriculture

The text of Congressman Brown's speech is included as Appendix J, pp. 81- 96. Some of the major points of his presentation were:

The recently-released report entitled Global 2000 painted a somewhat pessimistic picture of the future. We can either look at the changes coming as a threat or view them as challenges. Government is basically conservative, slow to change. The pace of change in recent years is such that government has been in a reactive mode, when we need to be utilizing our best minds to forecast emerging problems and help us seek solutions to them.

What are some of the problems facing us? Increasing fossil fuel prices, which affect fertilizer, pesticide, operating equipment, and food transportation prices. The challenge is to discover alternative sources of fuels, such as biomass. Another major problem is water supply and quality. The challenge is to invest in conservation rather than reclamation projects, develop drought and saline resistant plant strains and alternative, replacement crops. Soil erosion is a major concern, influenced by tillage and cropping patterns, and changing patterns of farm ownership. All of these are issues that need the attention of agricultural researchers.

The agriculture sector is failing to make its case with OMB and Congress and as a result research and extension funds suffer relative to other government research functions. We must build a new constituency in urban areas, bridge the gap between producers and consumers. We need to focus attention on less resource-intensive forms of agriculture, crop loss yield monitoring, integrated pest management systems, alternative farming systems, advanced irrigation technology.

We cannot afford to rest on past accomplishments. We need to see these problems in a new light, as great challenges.

29.0 Report on ESCS Research on the Economics of Integrated Pest Management -
John L. Baritelle

Baritelle is with the Pest Control Branch of the Natural Resource Economics Division of ESCS, located at Riverside. The Branch has two major programs, one on the economics of pesticide regulations, and the other on the economics of pest management technologies. Baritelle is located in the western region in order to help identify and foster areas of cooperative research within the region on the economics of pest management technologies. Much of the research is conducted by SEA and SAES scientists (and graduate students) through cooperative agreements with ESCS. The intent is to assess those technologies which are feasible, and compare them with existing pest management systems available today. Another goal is to assist in the establishment of research priorities in the pest management field.

Some of the projects underway in the western region include:

- (1) A program at the University of Wyoming dealing with the control of grasshoppers using a biological control (protozoa).
- (2) A project with SEA in Washington on green peach aphid and its effects on sugarbeets and potatoes. The aphid winters in small peach orchards.
- (3) Reclamation of sagebrush land in Nevada.
- (4) Several projects in California:
 - a) Methods of storing raisins and other high value commodities in oxygen.
 - b) Ex post assessment of the benefits that accrued to growers from research on red scale and pheromones.
 - c) Evaluation of the Fillmore Pest Control District, where 300 families have taxed themselves to control pests in their area through biological means.

Whenever possible, ESCS tries to pull together some money for a feasible project and assign graduate students to it, since it helps generate new people in the field. If Directors have ideas for projects, please let Baritelle know. Papers and theses are now starting to appear from this program, and they will receive wide dissemination.

30.0 Adjournment

Chairman Johnson adjourned the meeting at 12:00 noon, Friday, August 8, 1980.

JOINT MEETING OF
WESTERN ASSOCIATION OF AGRICULTURAL EXPERIMENT STATION DIRECTORS
AND WESTERN SEA-AGRICULTURAL RESEARCH ADMINISTRATORS

August 6-8, 1980
Casa Munras Garden Hotel
Monterey, California

AGENDA

WEDNESDAY, AUGUST 6, 1980

Joint Meeting - Western Directors, Liaison Representatives, and SEA-AR

- | | | |
|---------|------|---|
| 8:00 am | 1.0 | Call to Order |
| | 2.0 | Introductions |
| | 3.0 | Announcements |
| | 4.0 | Adoption of Agenda |
| 8:20 | 5.0 | Distribution of Written Reports/Discussion of Procedures for Afternoon Sessions |
| 8:40 | 6.0 | Report on Office of Technology Assessment (OTA) Task Groups - <i>J. B. Kendrick, Jr.</i> |
| 9:00 | 7.0 | Report on Joint Council on Food and Agricultural Sciences - <i>J. S. Robins</i> |
| 9:15 | 8.0 | Report on Interim National Research Planning Committee - <i>M. T. Buchanan</i> |
| 9:30 | 9.0 | Report on National Agricultural Research and Extension Users Advisory Board - <i>M. T. Buchanan</i> |
| 9:45 | | COFFEE BREAK |
| 10:00 | 10.0 | Committee Management by Computer Conferencing - <i>L. W. Dewhurst, R. L. Caldwell</i> |
| 11:00 | 11.0 | Report on SEA - Technical Information Systems - <i>Dr. Richard A. Farley, Administrator, SEA-TIS</i> |
| 11:30 | 12.0 | Report on SEA - Agricultural Research - <i>Dr. Terry B. Kinney, Jr. Administrator, SEA-AR</i> |
| 12:00 n | | GROUP LUNCHEON |
| 1:00 pm | 13.0 | Subregional Planning Discussions - SAES and SEA-AR
Pacific Northwest (ID, OR, WA)
California-Hawaii (CA, GU, HI)
Arid Southwest (AZ, NV, NM, UT)
Rocky Mountains (AK, CO, MT, WY) |
| 2:45 | | COFFEE BREAK (during subregional sessions) |
| 4:00 pm | 14.0 | Reports from Subregional Planning Groups |

THURSDAY, AUGUST 7, 1980

Joint Meeting - Western Directors, Liaison Representatives, and SEA-AR

- | | | |
|---------|------|--|
| 8:00 am | 15.0 | Report on Western Regional Council - <i>H C Cox</i> |
| 8:15 | 16.0 | Report on Western Research Committee - <i>C. E. Clark, D. E. Herrick</i> |
| 8:30 | 17.0 | Committee of Nine Report - <i>C. E. Clark</i> |

THURSDAY, AUGUST 7 (continued)

- 8:45 am 18.0 Research Implementation Committee (RIC) Report - *L. W. Dewhirst*
19.0 Reports from Federal Cooperators
9:15 19.1 SEA-Cooperative Research Report - *W. I. Thomas*
9:30 19.2 SEA-Agricultural Research Report - *H C Cox*
9:45 19.3 Forest Service Report - *D. E. Herrick*
10:00 COFFEE BREAK
10:15 19.4 ESCS Report - *M. L. Cotner*
10:30 19.5 Environmental Protection Agency Report - *R. G. Kuykendall*

Western Directors and Liaison Representatives (SEA-AR meeting separately)

- 11:00 20.0 Approval of Minutes of March 26-27 Meeting
11:05 21.0 Director-at-Large Report - *M. T. Buchanan*
11:30 22.0 Report of Chairman/Report of Executive Committee - *D. D. Johnson*
12:00 n LUNCH
1:00 pm 23.0 ESCOP Report - *C. E. Hess*
1:15 23.1 ESCOP Legislative Subcommittee Report - *R. J. Miller*
24.0 Reports from WDA Liaison Representatives
1:30 24.1 Home Economics - *B. E. Hawthorne*
1:45 24.2 ASCUFRO - *R. M. Kallander*
2:00 24.3 Veterinary Medicine - *W. G. Huber*
2:15 24.4 Cooperative Extension - *C. McKenna*
2:30 24.5 Resident Instruction - *R. G. Seals*
2:45 ADJOURNMENT - CATCH BUS FOR VINEYARD TOUR

FRIDAY, AUGUST 8, 1980

Western Directors and Liaison Representatives (SEA-AR meeting separately)

- 8:00 am 25.0 Elections
26.0 Resolutions
27.0 Future Meetings
28.0 Other Business
9:45 COFFEE BREAK

Joint Meeting - Western Directors, Liaison Representatives, and SEA-AR

- 10:00 29.0 Report on SEA - Competitive Research Grants Office - *D. W. Krogmann*
10:30 30.0 Report on ESCS Research on the Economics of Integrated Pest Management - *J. L. Baritelle*
11:00 31.0 Presentation by Representative George E. Brown, Jr., Member of House Agriculture Committee and Chairman of House Subcommittee on Science, Research and Technology
12:00 n ADJOURNMENT

Report to Southern Directors
on
Users Advisory Board Meeting
(Washington July 14-16, 1980)

From: J.E. Halpin

- I. During the opening comments, Jim Nielson told the members of the board about recent events, etc., including:
 - a. Nielson is under some pressure from Congressional staff to establish separate and independent staff for the Users Advisory Board and the Joint Council.
 - b. Congressional staff seek and do indeed read the reports issued by the UAB. Current problems relates to timing --- reports are not submitted early enough to be useful in the Congressional budgetary process.
 - c. Congressional staff seek advice on the proper "division of labor" between the agencies (partners) involved in research. Also, they want information on what areas can be cut back.
 - d. One board member has resigned due to health problems. He is to be replaced.
 - e. UAB is considering having a study made of their impact on the bureaucracy (executive/legislative). Wrestling with whether to get an outside contractor (and possible problems of cost) vs. in-house effort (and possible problems of bias and credibility). A compromise effort may develop with a contract to review procedures, questions, and prepare comments on the final report. Purpose of study: to help in consideration for the 1982 Farm Bill.
- II. The UAB spent considerable time on the Issues before the Board and the role of the Board relative to each issue. (Final results to be reviewed at their planned September meeting. The issues:
 - a. Structure of agriculture and the nature of competition in the production/marketing system.
 - What should be the role of the research system; the clientele. What is the mission.
 - Should research cause (stimulate) the structure or follow the structure. Is there any desired consistency between research and policy?
 - How can good research lead to good or new policies?
 - Research and extension need to be closely linked.
 - b. Natural resources. What type and how much research is needed to address current use vs. long-range conservation needs.

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Report to Southern Directors

- c. What are the Objectives of U.S. Agriculture. This includes the U.S. Food System: production, processing, transportation, etc.
- Board needs to describe the conflicts that exist within the system and then give parameters for balancing.
 - System should satisfy the food and nutritional needs of the USA
 - The total food system should provide employment opportunities (as an aspect of strengthening rural communities).
 - There is a need to determine the impact of research and how best to use it.
 - There should be adequate foodstuffs in reserve to meet US needs (possibly international needs as well).
 - Our national natural resource base must be maintained.
- d. Quality and Quantity in food production. Some members "come on" to the idea that quality is a desired goal once needed quantities are available.
- e. Basic and Applied Research - what percentage of the program should be in each. UAB has no good idea of what are the limits of basic research although some members seek understanding of the continuous nature: basic (various degrees) to applied (range of levels).
- f. The organization of the Research-Extension System
- Who should be served by the system?
 - Is extension equipped to serve the urban area? Does it have the resources? Are its people adequately (properly) trained?
 - Should urban areas be served at all?
 - Are there significant regional differences?
 - Can agencies be asked to do more to serve more people without additional resources.
- g. What should be the Federal Role in the Research/Extension System
Manpower, funds, agencies, methods of distribution, who makes what decisions for whom.
- h. What are the Economics of the Food and Agricultural System. Who makes the profits? Where can more efficiencies be developed?
- i. What are the broader Social-Economic Effects of Research/Extension System.
What things should the Board study and comment on: Questions asked by members ---
Can we agree on any aspect of this?

General considerations - Research/Extension System:

1. Whatever an agency is asked to do, adequate resources should be available to get the job done.
2. Local flexibility is required. Must be able to meet the demands of local needs. Should be able to use local voluntary leadership as desired and possible (case of Extension).
3. Need to establish appropriate performance criteria: "floors, not ceilings".
4. The real (fundamental) need is to meet the food and agricultural information and technology needs of producers and consumers. Society must be served.

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Report to Southern Directors

Other Comments

1. The primary (long range) beneficiary of agricultural research/extension is the consumer. The system is not getting this message across.
2. Need a concrete definition of the family farm that everyone involved can accept.
3. Research may have unintended socio-economic effects. Is that the fault of research or of society's methods for adopting research?
There may result, from any technological change, inequitable distribution of the effects.
4. USDA needs to be made aware of the types of research needed by small scale farmers.

- III. In preparing for the October report at the September meeting, the staff is to prepare drafts of papers on:
- a. Proposed levels of funding for the participating agencies
 - b. Proposed (desired) allocations of responsibilities for agencies involved.
 - c. Consider areas (to be determined) that might be considered low priority and for which reduced efforts could be recommended.

Also: The situation concerning facilities for the colleges of 1890, organic farming, and the influence of private enterprises on the research efforts of the public agencies.

Explanation: At the April meeting (California) of the Board, a change was leveled against a California scientist concerning his acceptance of grants from industry and his expert testimony on related cases. Following the meeting, the Board received a strong letter of protest from the scientist giving his side. The Board agreed to contact NASULGC and ask it for information on the policies of member universities relative to industry support and subsequent activities. It was noted that because of short agricultural research budgets, industry grants might pull scientists away from high priority ag research to lower priority areas of research. However, funds from grant-rich federal agencies can do the same.

- IV. Next meeting: September 15-17 in New Hampshire

- V. Attachments: Papers developed by Dr. John Pino (UAB) on:
- Basic and Applied Research
 - Organization and Structure of the Food and Agricultural Research and Extension System
 - Objectives held for U.S. Agriculture

July 23, 1980

COMMITTEE MANAGEMENT BY COMPUTER CONFERENCING

By

Roger L. Caldwell*
Council for Environmental Studies
College of Agriculture
University of Arizona

INTRODUCTION

Beginning in the mid-1970's, Computer Conferencing developed along several different formats and shifted from experimental basis to pilot operation. During this same time period, several other changes occurred. For example, it became evident that general administrative accountability and efficiency were receiving increased attention, resource limits were realized, and questions were raised on the role of personal computers in administrative function (I am defining a personal computer as a "personal" unit within convenient access of a user, so that it includes mini-computers, micro-computers, or on-line terminals). These personal computers, in recent years, have become relatively inexpensive and their capability has increased significantly. Even though personal computers are being rapidly introduced into normally functioning offices, the technology continues to change rapidly. It is clear that this will cause office structure and function to change significantly in the next several years.

Also, during the period of the 1970's, significant strides were made in information availability and use, although there has been a general lag for many in using such new knowledge. Not only have traditional groups been granted greater access to this expanded information availability, but entire new groups have been able to interact with existing sources as well as develop their own sources. Thus, today there are many new people and institutions (including developing institutions)

*Presented to Joint Meeting of Western Association of Agricultural Experiment Directors and Western SEA-Agricultural Research Administrators, August 6, 1980, Monterey, California.

involved in information transfer and use; this usage has been largely due to the impacts of changing computer technology.

All of these factors, along with others, indicate that there are some emerging trends that need to be considered when evaluating the role of information management and universities. (See Figure 1).

Fig. 1 EMERGING TRENDS

1. Management accountability and efficiency
2. Computer processing technology/costs
3. University clientele and function
4. Information availability and use
5. Natural resource constraints
6. Complexity and interaction

By taking advantage of some of these emerging trends, rather than relying on an extrapolation of past experiences, it is much easier to anticipate change than simply react to it. By considering a series of future situations which are desirable and possible, and then working back to the present to discover incentives and disincentives for change, new choices for action become available. It is within this developing structure of society and institutions that I will consider computer conferencing.

Computer conferencing needs to be viewed within the overall context of changes in administrative proceedings, information needs and availability, and electronic offices. It is currently a new tool, but will soon be an established and heavily relied upon process. There are many possible uses for computer conferencing that

are not immediately obvious, just as there are many uses for computer communication other than the currently popular electronic mail. Some examples are present in Figures 2 and 3.

Fig. 2 POSSIBLE USES

1. Agenda development
2. Committee discussion (advisory, technical, management)
3. Document review
4. Electronic mail/telephone calls
5. Emergency responses
6. Negotiation of definition, views, "facts"
7. Planning discussion via scenarios

Fig. 3 MORE POSSIBLE USES

1. Policy development
2. Progress reports/newsletters
3. Questionnaires
4. Record of transactions
5. Reference file for key/current data
6. Rumor mill/suggestion box
7. Voting scales

While the "Office of the Future" concept is widely discussed, specific definitions remain quite variable. It is clear, however, that the use of electronic communication can be used widely, cheaply, and at the same time can provide better service and improved working conditions for personnel.

The purpose of this paper is to review some of these considerations of computer conferencing with specific reference to committee management. It is presented as an overview with significant use of examples from Electronic Information Exchange System (EIES) developed by the New Jersey Institute of Technology. This particular system is presented as a case history and is only one of several available

for current practical use. In addition, there is a very large number of business concerns (both new and old) providing a variety of options in electronic communication; a portion of these commercial vendors offer electronic conferencing, although most use electric mail exclusively.

COMMUNICATION METHODS

It is not always a simple decision to determine which type of communication or information transfer is best for a particular situation. These choices are largely based on personal experience and tradition, availability of equipment, and resource constraints or legal requirements; some examples are given in Figure 4.

Fig. 4 TYPES OF INFORMATION TRANSFER

Face-to-face	Compuserve
Telephone	Source
Video	Planet
Facsimile	Confer
Mail	EIES
Printed documents	Plato

For purposes of this discussion, where group interaction is primary, the major techniques are face-to-face meetings (Figure 5), audio (Figure 6) or computer conferencing (Figure 7). These figures represent selected strengths and weaknesses for the three communication techniques.

Fig. 5 FACE-TO-FACE MEETINGS

STRENGTHS:

1. Complex problem solving
2. Pick up unrelated information
3. Social factors

WEAKNESSES:

1. Time and cost involved
2. Grandstanding of some speakers
3. Inhibition of some speakers

Fig. 6 AUDIO CONFERENCING

STRENGTHS:

1. Rapid and accurate
2. Controlled participation
3. Specific information requests

WEAKNESSES:

1. Limited participation
2. Impersonal
3. Low productivity

Fig. 7 COMPUTER CONFERENCING

STRENGTHS:

1. Time to think before responding
2. Flexible work hours and location
3. Equality of participants
4. Raise risky options (anonymously)

WEAKNESSES:

1. Reluctance to put in writing
2. Learn a new method
3. Impersonal
4. Junk mail

MANAGEMENT CONSIDERATIONS

All types of administrative units require some kind of an organizational structure and administrative process. Committees are included in this need, and computer conferencing is no different than any other type of communication process in that it must be properly administered (but not over administered). The normal administrative needs of planning, organizing, directing, and controlling, apply to committee management by computer conferencing. But they can be addressed through the use of electronic communication for application to other administrative functions. Some examples of management use of computers are shown in Figure 8.

Fig. 8 MANAGEMENT USE OF COMPUTERS

- . Data Processing
- . Management Information Systems
- . Word processing
- . Electronic Mail
- . Administration
- . Publications

Clearly, information processing and its role within the administrative structure has changed markedly in recent years. While the first uses were considered as "data processing" and generally isolated from the organizational management team, information matters have now been elevated in many areas to the highest ranking officials within an organization. We are now seeing the information/communication concept of an organization become the backbone of all operations, whether purely administrative or oriented towards production or research.

CONFERENCING COSTS

Specific costs for the EIES system are shown in Figure 9.

Fig. 9 EIES COSTS

System: \$66/mo, unlimited use
 Connect: \$3.75/hr. telenet (\$.0625/min)

<u>OPERATION</u>	<u>ENTER</u>	<u>RECEIVE</u>
Message	10 min (\$.63)	1 min (\$.06)
Conference	30 min (\$1.88)	2 min (\$.12)

Typical use is 20 min/session and 12 hr/mo for relatively light user.

Use daily with 1 hr. input and 15 min. receive (heavy use) would be 25 hr. if used 20 working days or 38 hr. if all 30 days are included.

\$38 hr/mo @ \$3.75/hr + \$66/mo = \$208/mo = \$2500/yr

The connect time of \$3.75 is for telenet ports (major cities); for remote areas is \$15.00. In addition, EIES is a member of EDUNET, as are many universities, for additional price considerations depending on use patterns. It is exceedingly difficult to make comparisons on computer conferencing vs. other communication techniques because of the variety of assumptions that need to be considered. For example, frequently material is typed into a computer communication system by a different person (at a probable lower salary) than someone attending a meeting or making a phone call. Computer communication costs do not include secretarial time for typing envelopes, correcting typographical errors or making multiple copies. With the changing office conditions of using word processing (which can be integrated into computer conferencing) and electronic mail, it is difficult to evaluate what real office costs may be currently. Given all of these assumptions, it is still helpful to have some type of a comparison on computer conferencing costs vs. alternatives. An example of traditional meeting costs is given in Figure 10 and the computer conferencing costs for similar information transfer is in Figure 11.

Fig. 10 SELECTED COST COMPARISONS

MEETINGS*

50 people for 2 days (plus one day travel)
 \$40,000/yr @ 230 working days = \$174/dy.
 Airfare (or travel) = \$160,
 per-diem = \$40

Salary (50 x 3 x 174) =	\$26,100
Travel (50 x 160) =	8,000
Per diem (50 x 40) =	2,000
Total =	\$36,100
Total/person =	\$722

*Assume all travel equal distance, 2 day meeting, does not consider non-business aspects of meeting

Fig. 11 SELECTED COST COMPARISONS

COMPUTER CONFERENCE*

50 people for 2 days meeting where 75% of material = business detail; 50% of business detail - presentation with remainder discussion.

EIES hrs connect (75% of 16) = 12
 EIES hrs receive material (50% of 12 + 25% of 12) = 9
 EIES hrs send (participants (25% of 12) = 3
 EIES hrs send (speaker) at 3 hr for 10 speakers = 30
 Total hrs speakers = 30
 Total hrs/participants = 12
 Total hours for 50 people = $50 \times 12 + 30 = 630$
 $630 @ 3.75 = \$2,362$.
 Total salary of 50 people = $630 \times 174/8 = \$13,702$
 Total cost = $\$13,702 + \$2,362 = \$16,064$

*Assumptions are difficult, time for discussion may be greater, but participants may join at a site for receipt of material. Time on computer is actually less, as secretary will type final draft into computer.

In both Figures 10 and 11, conservative estimates were made in terms of travel, per diem costs, and actual time involved in typing into a computer, as compared to preparing written material to bring to a meeting. Therefore, it is likely that the costs are actually greater for the meeting, and less for the computer conferencing than shown in Figures 10 and 11. A selected cost comparison is shown in Figure 12 for telephone calls, letters, or computer conferencing.

Fig. 12 SELECTED COST COMPARISON*

Phone (DDD) .50 first minute + .34
 1.18 for 3 min, 3.56 for 10 min.

Phone (WATTS) .19 per minute
 .57 for 3 min, \$1.90 for 10 min.

Written letter (copy) .04/page & .15 stamp per 5 sheets
 2 pages = .23, 8 pages = .62

Computer at .0625 5 min. input, 1 min receive = 6 min or .38
 2 hrs input, 4 min receive = 9.02

Postage to 50 receive at .15 = 7.50
 Copy 200 sheets @.04 = 8.00

*Secretarial/ dictation/paper not included, time delay, record of material, confirmation of receipt not received. In addition, computer can transfer data around in less time than indicated, and send multiple costs at essentially no additional charge. Computer cost of \$66/mo not increased (on 40 hr/mo use rate this would increase the .0675/min to .09.

If group decision making is required and a conference call is used, the phone costs would be approximately those given, but multiplied by the number of people in the conference call. (Normally a conference call can use only one person in WATTS with the remainder in direct distance dial). Costs of specialized audio equipment are not considered in this analysis.

EIES AS A CASE HISTORY

While there are a number of computer conferencing or electronic mail programs, EIES will be used as an example of significant special features; an overview of EIES is presented in Appendix A. While electronic mail is easily done on this system, it can also be used for text editing, transferring information electronically between various sources on the system, and storage of information. In addition, it can be made compatible with word processing units and used at both high and low transfer rates.

Electronic conferencing allows many of the same features as normal conferencing. For example, you can make statements so all can read from them, but you can also "talk behind someone's back" (by private messages). But, electronic conferencing allows some new features over face-to-face meetings or phone calls. For example, you can leave a message (in effect "talk" to a person) even though they were not in, with the response working the same way. In addition, you can make the command anywhere, including the phone booth at an airport.

When first addressed in EIES, the question INITIAL CHOICE? will appear. For experienced users, this is the only question asked, but for inexperienced, a menu may be printed out consisting of the choices (Figure 14).

Experienced users can answer ahead, since the choices are known in advance; this saves considerable time for those than know the system, but still allows the choice of menu detail for new users. In addition, there are a number of brief on-line explanations and easily available user consultants (on-line human access) for more difficult questions.

Included in these message choices are getting previous messages with complete text, displaying only the titles of messages, searching previous messages by author, date, or subject, sending new messages, editing or deleting old messages, or voting on specific questions; an example of the mechanics of composing a message is shown in Appendix G.

In order to pick up your mail on the EIES system, a special command can be defined to expedite the operation. When you first dial the computer, it responds by welcoming you and asking for your number and code. It then gives you the date and time and asks if you would like to see those on line. In the examples shown in Figures 16 and 17, a special command "+MAIL" has been defined, which will first indicate the numbers of those currently on line, (to see how much traffic is occurring) indicate how many messages or confirmations of receipt of earlier messages sent are waiting, pick up all the messages, automatically sign off the system, and give you how much money and time was used and the cumulative connects.

By using the TOPICS portion of the EIES system, a series of votes can be taken or selected simultaneous conferences run with variable membership, depending on the interest and specific topics. In this way, certain topics may have everyone present (such as the key note session of a conference) and other topics may consist only of certain people (such as several simultaneous committee meetings). However, in the case of the computer conferencing, there is no need to have a coordinator circulating among committee meetings to find out what's occurring, because that information is available at any time by reviewing that topic in the computer.

CONCLUSIONS

Obviously, the choice of going into computer conferencing is not easily made. There are some concerns and trade-offs which must be realized (Figure 23).

Fig. 23 SOME CONCERNS AND TRADE-OFFS

- . Reliability vs. cost
- . Human factors vs. machine efficiency
- . Frequency of use vs. incentives and rewards

The systems are relatively new, partly in the experimental stage, and subject to extreme competition at the present time. There may be problems of compatibility among various systems, there may be rapid technical obsolescence for some systems, and there may be reluctance on the part of the organization to risk the investment in a new technique. On the other hand, the options available may be such a significant improvement over current procedures, that the risk of using it may be relatively small; the issue of technical obsolescence may not be relevant because of the comparison of an inefficient process vs. one that is much more efficient, even though not technically current.

There are also some unknowns involved in making the decision to go to computer conferencing; we do not really know how to best format a specific face-to-face

meeting, nor are we fully aware of the best methods to manage research. There is a whole new need for body language when one speaks by computer rather than in a group, and there are needs to integrate computer conferencing with other types of electronic office management. (See Figure 24)

Fig. 24 SOME UNKNOWNNS

1. How to run a f-t-f meeting
2. How to manage research
3. Role of office personnel and personal computers
4. Impacts of new body language and cues
5. Resistance/incentives to change

Overall, there are some success criteria (Figure 25) that can be reviewed as necessary if computer conferencing is to be effective.

Fig. 25 SUCCESS CRITERIA

1. Need for communication for participants is high
2. Team leader or manager is designated
3. Management structure is agreed upon
4. Size is sufficient for new material (15-30)
5. Training on use is provided
6. Learning curve is recognized as necessary (6 mo)
7. Do not use to exclusion of other media

If some of these criteria in Figure 25 are not evaluated, the process may be doomed from the start, even though it was feasible.

If the choice is made to pursue computer conferencing, there are some factors which could be addressed to assure later success. A brief list of "how to get started" is printed in Figure 26.

Fig. 26 HOW TO GET STARTED

1. Review which system to use
2. Select group with common interests/needs
3. Design procedures using all group members
4. Begin small and allow for expansion
5. Provide operations and management support
6. Complete evaluation (on-going with feedback)

By reviewing some of the emerging trends discussed in the introduction and evaluating current options for computer conferencing, a choice may be easy or difficult. Above all, it should be remembered that computer conferencing will not replace all other types of communication. It is necessary to use each technique at its optimum use and not rely on one for all uses. With this attitude, computer conferencing will be successful when used in appropriate circumstances and will enhance the organization. If it is used for the wrong functions or the wrong groups, it will be both detrimental to the individual and to the organization; to ignore its potential will also be harmful to the organization, but to blindly accept the technology without appropriate entire organizational reevaluation will also cause problems.

SELECTED REFERENCES

1. Bruno, Jim N. 1979. Electronic Mail: It Gets There Fast. Admin. Mgmt. 60 (9):28ff.
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9. Vallee, Jacques et al. 1978. Group Communication Through Computers. Vol. 4 Social, Managerial, and Economic Issues.

Reference (copies) mailed in advance of meeting:

1. Rout, Lawrence. 1980. Wall Street Journal, July 24, 1980, pg. 1, 18.
2. Turoff, Murray and Starr Roxanne Hiltz. 1977. Meeting Through Your Computer. IEEE Spectrum. May p. 58-64.

RIC met August 4, 1980, in Monterey, California. Members and guests attending were: L. W. Dewhirst (Acting Chairman), H. F. McHugh, H C Cox, D. E. Herrick, C. I. Harris, J. E. Moak, W. I. Thomas, and M. T. Buchanan.

1.0 Regional Research Projects and Coordinating Committees scheduled to terminate September 30, 1980

- W-109 Codling moth population management in the orchard ecosystem
- W-133 Determinants of choice in outdoor recreation
- W-138 Herbicidal modification of the plant environment and its prediction
- W-144 Development of social competencies in children
- W-145 Impacts of relative price changes of feeds and cattle on the marketing of U.S. beef
- WRCC-23 Clothing and textiles
- WRCC-28 Developing, implementing, and coordinating research on crop loss appraisals
- WRCC-32 New and/or improved crops development for water conservation under arid land conditions

2.0 Requests for Project Revisions

2.1 W-133 Determinants of choice in outdoor recreation

A request for a revision of project W-133 entitled "Outdoor recreation and the public interest: evaluation of benefits and costs in federal and state resource planning" was received from Administrative Advisors C. A. Fasick and J. M. Hughes.

RIC recommends the revised project outline in the above-entitled area be approved and forwarded to the Committee of Nine, to be effective from October 1, 1980 to September 30, 1985, with Drs. C. A. Fasick (FS, Fort Collins) and J. M. Hughes (CO) to continue as lead- and co-Advisors, respectively.

(Action of WDA: APPROVED)

2.2 W-144 Development of social competencies in children

A request for a revision of project W-144 entitled "Development of social competence in children" was received from Administrative Advisor R. R. Rice.

RIC recommends the revised project outline in the above-entitled area be approved and forwarded to the Committee of Nine, to be effective from October 1, 1980 to September 30, 1985, with the following modification to the project outline: that objective 4 be eliminated, including the discussion on pages 12 and 13. RIC encourages the committee to exert greater effort to publish the results of its research. RIC commends the Administrative Advisor for his effective leadership of the project, and recommends that Dr. R. R. Rice continue to serve as Administrative Advisor.

(Action of WDA: APPROVED)

3.0 Requests for Establishment of New Projects

3.1 W- Population dynamics of weeds as parameters of integrated crop management systems

A request for a new project in the above-entitled area was received from Administrative Advisor C. E. Hess on behalf of project W-138 Herbicidal Modification of the Plant Environment and Its Prediction.

RIC recommends that the proposed project outline not be approved. Although the justification statement is good, the procedures section lacks specificity and an indication of an integrated research effort. RIC recommends establishment of an ad hoc technical committee entitled "W- Population dynamics of weeds as parameters of integrated crop management systems" to redraft the project outline, with Dr. P. van Schaik (SEA-AR, Fresno) to serve as lead-Advisor and Dr. D. E. Schlegel (CA) to serve as co-Advisor. Project W-138 will terminate as scheduled, September 30, 1980.

(Action of WDA: APPROVED)

3.2 W- Consequences of energy conservation policies for western region households

A request for a new project in the above-entitled area was received from Administrative Advisor R. R. Rice on behalf of WRCC-35 Family Housing Research in the Western Region.

RIC recommends the project outline in the above-entitled area be approved and forwarded to the Committee of Nine, to be effective from October 1, 1980 to September 30, 1985, with Dr. R. R. Rice to serve as Administrative Advisor.

(Action of WDA: APPROVED)

4.0 Request for Project Extension

4.1 W-145 Impacts of relative price changes of feeds and cattle on the marketing of U.S. beef

A request for a one-year extension of project W-145 was received from Administrative Advisor L. W. Dewhirst.

RIC recommends project W-145 be extended for one year, to September 30, 1981, with Dr. L. W. Dewhirst to continue as Administrative Advisor. The extension is needed to complete data collection and analysis, and complete preparation of a regional publication. RIC encourages the committee to explore the possibilities of combining its efforts with S-123.

(Action of WDA: APPROVED)

5.0 Requests for WRCC Extensions

5.1 WRCC-23 Clothing and textiles

A request for a three-year extension of committee WRCC-23 was received from Administrative Advisor L. L. Boyd.

RIC recommends WRCC-23 be extended for one year, to September 30, 1981, with Dr. L. L. Boyd to continue as Administrative Advisor. RIC cautions the committee to focus on coordinating their research programs.

(Action of WDA: APPROVED)

5.2 WRCC-28 Developing, implementing, and coordinating research on crop loss appraisals

A request for a three-year extension of WRCC-28 was received from Administrative Advisor W. R. Furtick.

RIC recommends that WRCC-28 be extended for three years, from October 1, 1980 to September 30, 1983. Because of Dr. Furtick's reassignment at the University of Hawaii, RIC recommends that Dr. Merritt Nelson (AZ) serve as Administrative Advisor.

(Action of WDA: APPROVED)

6.0 Responses to RIC Actions at March Meeting

RIC requested modifications of the extension petitions of WRCC-20 Virus and Virus-Like Diseases of Fruit Crops and WRCC-26 Evaluating Management of Predators in Relation to Domestic Animals. The modified petitions were received and are acceptable to RIC.

RIC also requested proper WRCC petitions be prepared for WRCC-41 Nutrient Sources for Western Swine Production and WRCC-42 Evaluation of Methods to Control Rodent Damage to Hay, Range, and Grain Crops. The petitions were received and reviewed and found to be acceptable by RIC.

7.0 Follow-up of "pending" projects or approved areas of work

7.1 W- Food processing and the environment

This ad hoc technical committee was authorized at the summer 1979 meeting with Dr. H. J. Tuma as Administrative Advisor. The committee is scheduled to meet this fall in Denver. Therefore, RIC recommends the ad hoc technical committee be approved for one additional year, to September 30, 1981, with Dr. H. J. Tuma to continue as Administrative Advisor, with the admonition that the committee should proceed to investigate initiation of a regional effort in this important area.

(Action of WDA: APPROVED)

8.0 Project and Coordinating Committee Reviews

Projects and committees were assigned to individual members of RIC for review; Administrative Advisors are invited to contact the reviewers (listed in parentheses) for their specific evaluations.

The following projects and coordinating committees appear to be progressing satisfactorily with good publication records, adequate resources, and the technical committees are following project objectives:

- W-45 Environmental distribution, transformation, and toxicological implications of pesticide residues (reviewer D. E. Herrick)
- W-102 Protection of livestock against internal parasites by management methods (reviewer H C Cox)
- W-118 Impacts of human migration flows and population dispersal on non-metropolitan people and places in the western region (reviewer M. L. Cotner)
- W-126 Physiological criteria for forage plant breeding (reviewer C. I. Harris)
-
- W-128 Trickle irrigation to improve crop production and management (reviewer H C Cox)
- W-130 Freeze damage and protection of deciduous fruit and nut crops (reviewers C. I. Harris/L. W. Dewhirst)
- W-147 Use of soil factors and soil-crop interactions to suppress diseases caused by soil-borne plant pathogens (reviewer C. I. Harris)
- RIC notes that if the project seeks continuation next year, it will need to place more emphasis on a coordinated approach.
- W-148 Climatic and phenological models for resource planning and management (reviewer M. L. Cotner)
- W-149 An economic evaluation of managing market risks in agriculture (reviewer H. F. McHugh)
- W-153 Food supplement usage and effects on nutritional status (reviewer L. W. Dewhirst)
- WRCC-11 Turfgrass (reviewer H C Cox)
- RIC notes that if the committee seeks to become a regional project, it will need to make provision for interdisciplinary involvement.
- WRCC-17 Control of fruiting (reviewer C. I. Harris)
- WRCC-33 Land and water management for control of salinity in western waters (reviewer L. W. Dewhirst)
- WRCC-34 Western regional integrated pest management (reviewer H. F. McHugh)
- RIC assumes that it will receive a regional project outline from WRCC-34 by the February 1, 1981 deadline for review at the March 1981 meeting.
- WRCC-35 Family housing research in the western region (reviewer J. R. Davis)
- If the Committee of Nine approves the proposed project on energy conservation policies, RIC assumes WRCC-35 will terminate as scheduled, September 30, 1981.

RIC also reviewed the following projects:

- W-127 Stand establishment of small seeded vegetable crops (reviewers C. I. Harris/L. W. Dewhirst)

RIC is concerned that regionality is lacking and more attention should be given to coordinating the efforts of participants.

- W-151 Optimization of the use of range and complementary forages for red meat production (reviewer D. E. Herrick)

RIC feels there is not close coordination or a clear plan of jointly meeting the project's objectives. RIC wonders if it would be helpful for the committee to establish subgroups to address the several objectives.

- W-152 Clogging of drainlines by mechanical, chemical and biological actions (reviewer J. R. Davis)

RIC is concerned about the low level of resource commitment to this effort. The major contributions are from SEA-AR and other federal agency personnel, and the SEA-AR participation is scheduled to be scaled-down.

9.0 Administrative Advisor Reassignments

RIC recommends the following Administrative Advisor reassignments:

- W-110 Relationships and interactions between pathogens, their hosts, and attack by bark insects -- Dr. J. B. Kendrick (CA) serve as lead-Advisor and Mr. P. Casamajor (CA) as co-Advisor, replacing Dr. H. F. Heady

- W-140 Energy in western agriculture--adjustments, alternatives and policies -- Dr. D. L. Oldenstadt (WA) serve as Advisor, replacing Drs. L. L. Sammet and M. N. Schroth

- W-147 Use of soil factors and soil-crop interactions to suppress diseases caused by soil-borne plant pathogens -- Dr. N. I. James (SEA-AR, Pullman) serve as lead-Advisor and Dr. L. L. Boyd (WA) as co-Advisor, replacing Drs. C. M. Gilmour and R. J. Miller

- W-148 Climatic and phenological models for resource planning and management -- Dr. J. M. Hughes (CO) serve as Advisor, replacing Dr. J. A. Asleson.

- W-150 Genetic improvement of beans (phaseolus vulgaris, L.) for yield, pest resistance, and nutritional value -- Dr. K. J. Lessman (NM) serve as Advisor, replacing Drs. W. G. Chace and M. N. Schroth

- IR-6 National and regional research planning, evaluation, analysis, and coordination -- Dr. M. T. Buchanan (DAL) serve as Advisor, replacing Dr. K. J. Lessman

- WRCC-28 Developing, implementing, and coordinating research on crop loss appraisals -- Dr. M. Nelson (AZ) serve as Advisor, replacing Dr. W. R. Furtick

- WRCC-38 Occupational exposure to pesticides -- Dr. I.J. Thomason serve as Advisor, replacing Dr. M. N. Schroth

(Action of WDA: APPROVED)

10.0 Documentation of Resource Commitments in Project Outlines

RIC continues to be concerned about the verification and documentation

RIC will investigate several alternatives to alleviate the problem and discuss the matter in detail at the spring 1981 meeting. RIC also will encourage the Committee of Nine to discuss this issue.

11.0 Regional Publication Procedures

Dewhurst and McHugh were named as a subcommittee to look into current western regional publication procedures and make recommendations back to RIC for possible changes in the procedures at the spring 1981 meeting. Jill will obtain information about procedures in the other three regions.

12.0 Regional Biological Control Quarantine Facility

The committee discussed the perceived need for a regional biological control quarantine facility. Cox and Schlegel were named as a subcommittee to determine what are the requirements for a building, support staff that might be needed, funds necessary, possible sources of funds, and potential benefits of such a facility. They will report back at the spring 1981 meeting.

13.0 Administrative Advisor Assignments

A list of all Western Administrative Advisors and their assignments is attached.

ADMINISTRATIVE ADVISOR ASSIGNMENTS

Bohmont, D. W.	W-84	Lessman, K. J.	W-150, W-157
Boyd, L. L.	W-147 ⁺ , WRCC-23	Lyons, J.M.	W-127, W-130, W-158
Buchanan, M.T.	IR-6	Matthews, D.J.	W-135 ⁺ , WRCC-26
Burris, M.J.	W-112	**McFadden, J.R. (UT)	WRCC-44
**Casamajor, P.	W-110 ⁺	McHugh, H.F.	W-143, W-153
Clark, C.E.	W-122	**McIntyre, G.A. (CO)	WRCC-25
*Cox, H C	WRCC-34 ⁺	**McLean, D.L. (CA)	WRCC-24
Davis, J.R.	W-128, W-155	Miller, R.J.	W-124, WRCC-34
**Davison, A. (WA)	WRCC-34 ⁺	Moreng, R.E.	W-136, W-142
Dewhirst, L.W.	W-102, W-145, W-151, WRCC-32	**Moss, D.N. (OR)	WRCC-27
**Dobson, R.C. (ID)	WRCC-34 ⁺	**Nelson, M.R. (AZ)	WRCC-28
Dugger, W.M.	W-126 ⁺ , W-152 ⁺ IR-4	**Niehaus, M.H. (NM)	W-157 ⁺
*Evans, C.E.	W-154	Oldenstadt, D.L.	W-118, W-140
*Fasick, C.A.	W-133	**Oldfield, J.E. (OR)	WRCC-39
Foote, W.H.	W-6, W-132, IR-1	*Plowman, R.D.	W-135, W-151 ⁺ , WRCC-37
**Gardner, B.D. (CA)	W-149	Pope, L.S.	WRCC-40
Hess, C.E.	W-131, W-138	**Preston, R.L. (WA)	WRCC-41
Hughes, J.M.	W-133 ⁺ , W-148	Rice, R.R.	W-144, WRCC-35, W-Energy Conserv.
*James, N.I.	W-147, IR-2 ⁺	Robins, J.S.	W-109, WRCC-43
Johnson, D.D.	W-106, W-154 ⁺ , WRCC-33	Schlegel, D.E.	W-134, WRCC-20, W-Weeds ⁺
**Jones, B.M. (CO)	WRCC-1	Thomason, I.J.	WRCC-38
Jordan, J.P.	IR-5	**Tueller, P.T. (NV)	WRCC-42
Kefford, N.P.	W-82	Tuma, H.J.	W-Food Processing
**Keim, W.F. (CO)	WRCC-13	**Upchurch, R.P. (AZ)	WRCC-11, WRCC-21
Kendrick, J.B.	W-110, W-149 ⁺	*van Schaik, P.	W-Weeds
*Knipling, E.B.	W-126	*van Schilfgaarde, J.	W-152
Lee, D.J.	W-45, IR-2	**Weiser, C.J. (OR)	WRCC-17
		Witters, R.E.	WRCC-29
		Young, R.A.	W-125, WRCC-30
		Zube, E.H.	W-156, WRCC-36

* USDA research administrators

** Other research administrators

+ Designates the Co-Administrative Advisor in a project with Co-Advisors

APPENDIX E

Economics, Statistics, and Cooperatives Service
Report to
Western Association of Agricultural Experiment Station Directors
and
SEA Research Administration

I. Highlights of Proposed Initiatives

- (1) The following general areas are included in the FY'81 budget proposal of the President. Congress has not yet acted.

Aerospace technology. Develop weather/yield models, collect ground data, research and develop remote sensing techniques for use in making foreign and domestic crop estimates, and develop area sampling frames in various countries.

Price statistics. Conversion of price surveys to a probability basis to permit measurement of data reliability.

Economic measures of agriculture and rural areas. Develop a new set of economic accounts and indicators to monitor the level and distribution of income, wealth, production costs, and income for farm households from all sources by size of farm, geographic location and type of enterprise; conduct research to determine the conditions and programs that would help improve the efficiency and well-being of small farmers.

Food demand and policy. Improve monitoring of the food prices, expenditures and consumption to assess the impacts of changes in the food sector on consumers and farmers, and to assess the consequences of various forms of consumer information.

World demand for U.S. agricultural commodities. Assess the impacts of policy changes, world production shifts, adverse weather conditions, transportation difficulties, monetary phenomena, income growth and higher energy prices.

Aquaculture. Collect data on catfish and trout inventories, cost of production, facility characteristics, volume of production, and marketing in major producing States.

- (2) The budget for FY'82 is in the early stages of its development. ESCS is considering initiatives in the following areas:

- Costs, performance and well-being of farm firms.
- Energy use in agriculture.
- Hired farm work force.
- Resource Economic Data System.
- Export demand potential for agricultural products.
- Organization and performance of agricultural markets.
- Aerospace remote sensing.
- Crop data improvement.

II. Highlights of Current Special Projects

- (1) Plans for 1981 Farm Bill—The 1977 Food and Agriculture Act expires in 1981. The new legislation will contain the guidelines for the national food system policy over the 1981-85 period. ESCS will provide information that the public and policymakers may use in defining and implementing the new legislation.

Among the topics to be covered in the prospective papers are the national and international setting for food and agriculture policy, the performance and economic well-being of the farm sector and farm people, our capacity to produce and the role of agriculture in rural communities. Analyses will focus on programs such as the farmer-owner reserve that affect more than a single commodity. Individual commodity issues will be examined for dairy and rice. Also to be examined are options for Food Stamps and nutrition programs, PL-480, international reserves, export initiatives, environmental programs, and transportation policies.

- (2) USDA Agriculture Structure Project—In response to Secretary Bergland's call for a national dialogue on the structure of American agriculture, ESCS is to provide data and analysis of the issues. The Agency recently published: (a) Structure Issues of American Agriculture, which discusses the factors that have influenced structure, and the problems that may arise in the future; (b) Another Revolution in U.S. Farming, which examines the structural trends in U.S. farming on a national and regional basis; and (c) U.S. Farming: How It's Organized and Managed, which examines regional and sectoral variation in farm structure. In addition, several papers have been prepared for Congress including the second annual report on the status of the family farm. These studies and others include analysis of the behavior of typical farms, economies of scale, intersectoral organization, the impacts of inflation, methods of measuring structural change and a focus on markets, institutions, and prices.
- (3) EC Enlargement Study—ESCS, currently has underway a substantial research program on the implications for U.S. agricultural trade of enlargement of the European Community (EC) by embracing Greece, Spain and Portugal. The effects of changes in population, labor force, wages, income, prices, farm structure, crop production, livestock production, and food consumption will be considered. The impact of EC enlargement on trade in selected Mediterranean products (citrus, almonds, walnuts, tomatoes (processed), peaches (processed), prunes, table grapes, raisins, and wine) and implications for the United States is being examined. This work involves a cooperative research agreement with the University of California--Berkeley--with direct participation by ESCS staff.

A special study is also underway on how accession to the EC of Greece, Spain, and Portugal and adoption of the common agricultural policy will affect their (and an enlarged EC's) supply, demand and trade balance for cotton. This in-house study will also assess both the direct and indirect impact on U.S. agricultural trade.

- (4) Cost of Production--Data from a 1979 survey of major crops were used to update the cropping practices assumed for cost of production estimates previously based on the 1974 survey. The cost of production estimates for 10 crops (cotton, corn, sorghum, barley, oats, wheat, soybeans, flaxseed, peanuts, and rice) are included in the annual report to Congress. It includes revised estimates for 1978, preliminary estimates for 1979, and projections for 1980.

The 1981 cost of production survey will collect data from 6,400 livestock producers concerning their 1980 operations. The species to be surveyed are hogs, beef cattle, cattle fed in farm feedlots, and sheep. Thirty-six States will be included in the survey for beef cattle, 18 States for hogs, 11 States for sheep, and 5 Corn Belt States for cattle feeders.

- (5) River Basin Studies in the West--River basin studies are designed to allocate resources of selected river basins to make the best possible use of the water and land. Analyses are made of alternative uses of resources to address problems of flood damages, insufficient water supplies, and inadequate drainage in agricultural and rural areas. Impacts of selected plans are estimated in terms of changed land and water use, agricultural production and farm and rural income. Studies in the West also deal with plans for allocating water to irrigation, municipal and industrial water supply, recreation and other uses. Currently, studies are underway in Washington, Oregon, Idaho, Montana, Colorado, New Mexico, Arizona, and California.
- (6) Pest Control Research Activities in the West--Within the past year, ESCS has initiated research on the economic aspects of pest management in the Western States. This research deals with estimating the economic feasibility of biological, cultural, and chemical controls and integrated systems employing one or more of these controls. The research is being carried out in cooperation with SEA, APHIS, Agricultural Experiment Stations, and extension services. The principal method of conducting the research has been through cooperative agreements. This year there will be 11 agreements in force involving 8 Western States.

(7) Other Projects of Interest to the Western Region.

a. International Trade

- o Assess the pricing and marketing policies of Canada in a structure, conduct, and performance framework and their impact on world trade, and U.S. exports.
- o Evaluate U.S. grain policies for the 1980's in response to international market conditions and assess their impact on domestic and world markets. Emphasis is on grain reserves.
- o Review of the current U.S.-USSR Grain Agreement to examine alternative proposals; different Soviet grain purchasing scenarios; and the U.S. farm income and price impacts of these.
- o Update data, reestimate equations, and revalidate model for Australian grains (wheat, sorghum, barley). The model will also be placed on line.
- o Develop an econometric model for supply and demand for Canadian wheat, barley, and rapeseed. The completed model will also be placed on line.
- o Analysis of the recent expansion in Canadian rapeseed and U.S. sunflower seed production will focus on 1985 production and the effect that this may have on future U.S. soybean exports.
- o Similarities and differences between Canadian and American agricultural structure will be explored in addition to an assessment of the structural problems of agriculture in Australia and New Zealand.
- o Effects of Australia's implementation of the new Wheat Stabilization Policy on production and exports of Australian grain is to be explored.

b. Land-Water Resources

- o Crop-water production functions are being estimated for major irrigated crops from secondary data in eight Western States. Economic optimum application rates will be determined for irrigation scheduling rules to achieve water and energy conservation.
- o A cooperative study is being conducted with Colorado State University to analyze ways of using market or quasi market mechanisms for reallocating water use in short-term emergency situations such as drought.
- o An analytic model to assess the economic impacts of pollution abatement in irrigation return flows is being developed for the San Joaquin Valley. Additional cooperative work with EPA is planned to extend and apply the model to other irrigation areas.
- o The Rural Clean Water Program (RCWP) Committee has selected 13 pilot areas nationwide for program testing. The Rock Creek project in Idaho is one of three areas selected for intensive monitoring and evaluation of environmental and economic effects.
- o Proposal for an economic analysis of pasture and range resource use was sent in June 1980 to experiment station directors in West, Southwest, and South for review.
- o The statistical report Landownership in the United States, 1978 was published in April. Regional summaries, from the national landownership survey will be published this summer.

c. Rural Development

- o The Economic Development Division is establishing a field station at Oregon State University in conjunction with the Western Rural Development Center. Ms. Mary Ahern is being transferred from Washington to OSU and will work on health issues. The focus of her efforts will be redefining the role and function of the region's rural hospitals within the current broader health care system.

d. Production and Marketing

- o Research at Colorado State includes a study of economies of size and developing ranch enterprise budgets for the FS to use in preparing resource management plans and BLM to prepare economic impact statements.
- o Research at the University of California, Davis, includes studies which are evaluating the 160-acre limitation on irrigation projects for the Department of the Interior; mechanization in fruit and vegetable production; development of a chronology and bibliography on the 160-acre limitations; and research on the history of the control of disease problems in agricultural production.
- o Research at Oregon State focuses on beef cattle production systems. Included are production functions for beef animals and analysis of management strategies for various types of beef cow enterprises over the cattle cycle.
- o At Washington State, research is underway to develop long run average cost curves for some 22 representative (typical) farms now in the ESCS typical farm series. This research contributes to other ESCS studies on the economies of farm size.

III. ESCS Field Staff

ESCS maintains a substantial field staff related to its statistics and economic research activities (tables 1(a) and 1(b)). Many of these are located in the Western Region where they develop data to meet county, state and national needs and engage in research on regional as well as national problems.

Table 1(a)--Distribution of PFT Employees by GS Series in Washington and Field (50 States) Annual (as of October each year)

	<u>1980 1/</u>	<u>1979 2/</u>	<u>1977</u>	<u>1974</u>	<u>1971</u>	<u>1963</u>
Total professional employment						
Washington	422	407	385	472	424	375
Field	145	149	168	182	213	168
Total support employment						
Washington	200	189	301	317	314	343
Field	9	9	16	29	42	38
Total employment						
Washington	622	596	686	789	738	718
Field	154	158	184	211	255	206
Total employment (PFT)	776	754	870	1,000	993	924

1/ March 1980.

2/ September 1979.

Table 1(b)--ESCS Permanent, Full-Time Employment in the Western Region as of 3/08/80

State	ECONOMICS			STATISTICS		
	Professional	Support	Total	Professional	Support	Total
Arizona	5	0	5	5	6	11
California	11	0	11	24	17	41
Colorado	5	0	5	11	12	23
Hawaii	0	0	0	2	6	8
Idaho	0	0	0	8	9	17
Montana	1	0	1	7	5	12
Nevada	0	0	0	2	3	5
New Mexico	0	0	0	3	5	8
Oregon	7	1	8	10	7	17
Utah	1	0	1	5	5	10
Washington	1	0	1	10	10	20
Wyoming	0	0	0	7	5	12
Total	31	1	32	94	90	184

IV. Cooperative Research Agreements

ESCS has cooperative research agreements with numerous educational institutions in the Great Plains and elsewhere. The total funding has been:

	<u>Intramural</u>	<u>Extramural</u>	<u>Total</u>
	<u>-----\$'000-----</u>		
1967	183	211	394
1968	278	198	476
1969	377	219	596
1970	296	205	501
1971	425	394	819
1972	363	297	660
1973	564	557	1,121
1974	596	528	1,124
1975	799	478	1,277
1976	642	826	1,468
TQ 1976	372	512	884
1977	1,155	1,043	2,198
1978	771	1,624	2,395
1979	1,331	534	1,865
1980 (as of 6/27)	2,229	564	2,793

The following shows the distribution of FY'80 obligations for cooperative research agreements among States in the Western Region.

	<u>Intramural</u>	<u>Extramural</u>	<u>Total</u>
Arizona	\$ 16	\$-0-	\$ 16
California	93	88	181
Colorado	50	23	73
Hawaii	-0-	-0-	-0-
Idaho	-0-	-0-	-0-
Montana	39	-0-	39
Nevada	20	-0-	20
New Mexico	-0-	-0-	-0-
Oregon	39	-0-	39
Utah	2	-0-	2
Washington	20	4	24
Wyoming	-0-	-0-	-0-
Western Total	<u>\$279</u>	<u>\$115</u>	<u>\$394</u>

(Rounded off to nearest thousand)

V. Major Special Surveys 1980-81

The following is a list of surveys that have been completed or in the various stages of planning.

- o Cost of Production Surveys--ESCS provides annual estimated costs of producing wheat, feed grains, cotton, rice, and dairy products. The 1980 surveys will include flue-cured tobacco, rice and dairy and those for 1981 will cover beef, hogs, and sheep, sugarbeets and sugarcane.
- o Farm Production Expenditure Surveys--provide data to support farm income statistics and other economic indicators. Data are also used in computing the Parity Indexes.
- o Pesticide Use Surveys--provide data on pesticide use through a continuing series of surveys. Data include acreage treated and total pesticide use by type and application. The 1980 surveys included vegetables, cotton, potatoes, and grapes. The 1981 plans are to include corn, soybeans and grain sorghum, and possibly wheat.
- o Farm Economic Indicators--data will be obtained by type of farm and value of sales class, by form of business organization, and dependence on agriculture to support the redesigned indicators.
- o Small Farms Survey--provides data on the social and economic characteristics of households operating small farms to test the impacts of alternative means for improving family income.
- o Pilot Household Farm Establishment Survey--being planned to provide detailed economic and financial data for farm establishments in several test counties. At the same time related information would be obtained for the households that provide resources to these establishments.
- o Pilot Farm Labor Survey--a pilot information survey in Florida, Nebraska, Ohio, and Oregon collecting data from rural households on the number of hired farm workers, personal and household characteristics, amount of farm work, migrant status, nonfarm work, and sources of income.

I believe that our present group of DAL's is highly effective. Each of us is respected in his own region. Each covers elements of the national scene with which he is familiar, informed or challenged.

We are increasing our productivity and effectiveness by mutually agreed on responsibilities coupled with improved communications; that is, we divide up the tasks among us according to our individual backgrounds, competence, and interest with each informing the others.

We view ourselves as "staff" but as staff with important policy roles. We want to assist in policy decision-making by helping to spell out policy alternatives and their probable consequences; we will support and help to implement the policy decisions made: Too frequently policy decisions seem to be made with inadequate background.

We believe it is part of our job to add an element of continuity to the federated system of which we are a part and in which elected leadership changes frequently. But we want to do so by helping to preserve only the best of the status quo while seeking to improve it. We will respond to calls for reactions and help but we want to be able also to advance initiatives on our own from time to time (all within the constraints of ESCOP and the Regional Associations).

We frequently discuss and develop mechanisms by which we may work together more effectively on high priority issues of national consequence, keeping in mind our regional differences and priorities.

We have been moving in the direction of more collaborative efforts, partly as a result of our own inclinations and desires, partly as a result of a push by our Regional Chairmen and the Chairman of ESCOP.

There are several categories of actions in which we plan more collaboration on behalf of the SAES collectively.

- I. Assist in the identification of emerging policy issues and identify persons qualified to develop "white papers" on them; assist in the preparation of position papers.
 - A. Too frequently we are in a reactive mode. We need to spend some time assessing where we would like to be and in developing alternative strategies that might get us there. Such activities would be checked with and cleared by the Chairman of ESCOP and possibly by the Chairmen of the regions.
 - B. Much about the SAES as a system that needs to be communicated is not getting done. We seem to be constantly reminding people of the state-side component of the system.
- II. Assist on activities that require or strongly suggest follow-up actions by SAES Directors.
 - A. Develop budget information, strategies and justification.
 - B. Assist in reacting to USDA actions, pronouncements, and policy formulations that suggest response or reaction.
 - C. Assist in reacting or responding to NASULGC actions and

- III. Activities or events that impact on all SAES. All SAES Directors to be informed.
 - A. USDA actions, pronouncements and policy formulations that need interpretations beyond those provided.
 - B. Actions by other groups that require an SAES interpretation or "early alert".
 - C. Policy reactions and formulations by SAES Directors.
- IV. Information that may be useful to all SAES (such as, for example):
 - A. Revision of the "Dictionary".
 - B. Certain data summaries with interpretations.
 - C. Other.
- V. DAL initiatives and identification of opportunities.
 - A. Whenever one or more of the DALs sees an opportunity, they check with the other DAL.
 - B. Depending on the nature of the item, further checking with regional chairmen and the chairman of ESCOP may be required.



OFFICE OF THE DEAN

COLLEGE OF AGRICULTURE

MONTANA STATE UNIVERSITY, BOZEMAN 59717

July 29, 1980

To: Executive Committee - WAAESD

From: J. A. Asleson, Treasurer

Re: State Assessments for DAL and WD Special Fund Budgets

With Alaska rejoining the Western Region, both Jill and this office have been reviewing the WD minutes and other documents to determine the basis for calculating the assessments to be assigned to Alaska and Guam. You will recall that Guam was arbitrarily given an assessment of \$500 for the DAL budget but none for the WD Special Fund.

The first assessments made by the Western Directors was made in 1953 to cover the costs involved in hiring a secretary for WAERC. Unfortunately, we do not have a copy of those minutes so I cannot give you the basis for that assessment. However, reference is made in the minutes of March, 1964, which listed assessments as follows:

"The annual contribution to the WAERC fund held at Montana by each state since 1953, and tentatively proposed for 1964-65, is as follows: Arizona \$302.50; Colorado \$550; Hawaii \$55; Idaho \$385; Montana \$330; Nevada \$55; New Mexico \$302.50; Oregon \$550; Utah \$220; Washington \$770; and Wyoming \$165. Alaska is expected to continue as a member of WAERC and to contribute \$55 per year. California's payment will continue to be made directly as salary to the person holding the Secretary-Recording Secretary position."

At the Lake Arrowhead meeting of March 1963, my memory tells me that the RRC (I believe I was chairman) had been directed to propose a basis for a "formula" distribution of the Regional Research Funds allotted to the Western Region. At that time, the RRC proposed and the Western Directors approved a "formula" based on the previous five year average percentage of the Western Region RRF received by each state. This "formula" was then used as the basis for the assessments agreed to at the March, 1966 meeting and formally adopted at the November, 1966 meeting. We have used these same percentage assessments without change since that time.

Executive Committee - WAAESD

-2-

July 29, 1980

In reviewing the Memorandum of Agreement re: The DAL position which was accepted and signed by each of the original twelve states we find the following statement:

- (d) " The pro rata distribution of costs under the annual budget for this position shall be on the same basis as the percentage distribution of the regional research funds is to each experiment station which is a party to this agreement. The Fiscal Clearing Agent, as hereinabove defined, shall charge each such experiment station for its respective share of the cost."

For various reasons, many of which I cannot explain, the distribution of the RR Funds in the Western Region have not followed the "formula" adopted in 1966. On the basis of the above statement in the Memorandum of Agreement, the assessments should have been modified as the percentage distribution of the RR Funds changed. This I have not done. If the Western Directors wish to use the current distribution of the RR Funds as the basis for the DAL and WD Special fund assessments, the DAL assessments will be those in Alternative 2 as prepared by Jill Moak. You will note that these calculations include Alaska and Guam on the same basis as the other 12 states.

As a basis for discussion by the Executive Committee, I am attaching pages from past WD minutes that seem to refer to this problem together with three alternative assessments as prepared by Jill.

I hope this gets to you before the meeting - sorry for the delay.

JAA:dw

enc.

cc: Jill Moak

PRO RATA SHARE OF FUNDS FOR DAL ACCOUNT
APPROVED DAL BUDGET FOR 1980-81: \$102,678

ALTERNATIVES TO CONSIDER WITH ENTRY OF ALASKA IN THE WAAESD

State	ALTERNATIVE 1		ALTERNATIVE 2			ALTERNATIVE 3		
	Current Assessment %	Assessment Based on Current %	FY 80 Base RRF Funds	% of Region Total of FY80 RRF	Assessment Based on RRF %	FY 80 Base Hatch Funds	% of Region Total of FY80 Hatch	Assessment Based on Hatch %
Alaska	--	\$ 500.00	\$ 94,196	1.60	\$ 1,643.00	\$ 585,915	4.46	\$ 4,579.50
Arizona	8.3	8,439.00	498,527	8.46	8,687.50	792,419	6.03	6,191.50
California	16.3	16,574.00	1,006,329	17.08	17,539.00	2,297,623	17.48	17,948.00
Colorado	11.3	11,489.50	610,405	10.36	10,638.50	1,047,665	7.97	8,183.50
Guam	--	500.00	80,576	1.37	1,407.00	497,322	3.78	3,881.00
Hawaii	4.1	4,169.00	252,741	4.29	4,405.50	637,787	4.85	4,980.00
Idaho	6.8	6,914.00	393,025	6.67	6,849.50	971,930	7.39	7,588.00
Montana	7.6	7,727.50	439,979	7.47	7,671.00	926,814	7.05	7,239.00
Nevada	4.1	4,169.00	241,148	4.10	4,200.00	575,882	4.38	4,497.50
New Mexico	4.6	4,677.00	264,915	4.50	4,621.00	821,634	6.25	6,417.50
Oregon	11.0	11,184.50	623,159	10.58	10,864.00	1,209,231	9.20	9,446.00
Utah	8.1	8,235.50	453,891	7.70	7,907.00	725,723	5.52	5,668.00
Washington	11.3	11,490.00	580,842	9.86	10,125.00	1,380,999	10.50	10,781.00
Wyoming	6.5	6,609.00	351,287	5.96	6,120.00	676,302	5.14	5,277.50
TOTALS	100.0	102,678.00	5,891,020	100.00	102,678.00	13,147,246	100.00	102,678.00

Alternative 1: Would continue the current method of allocation, with Guam and Alaska contributing \$500 apiece and the other states contributing on the basis of the 1966 formula. The basis for the 1966 formula is not included in the WAAESD Minutes, but was supposedly based on RRF distribution.

Alternative 2: Would reapportion the pro rata share of each state based on its percentage of RRF funds received in the Western Region in FY 1980.

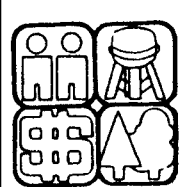
Alternative 3: Would reapportion the pro rata share of each state based on its percentage of Hatch funds received in the Western Region in FY 1980.

WDA OFFICERS AND REPRESENTATIVES TO
REGIONAL AND NATIONAL GROUPS
1981

OFFICE	TERM ENDS	REPRESENTATIVE OR NOMINEE	REMARKS
*Chairman	12/1981	D. D. Johnson (CO)	1-yr. term; may be reelected for one additional term
*Chairman-Elect	12/1981	D. W. Bohmont (NV)	"
*Past Chairman	12/1981	R. J. Miller (ID)	"
*Secretary	12/1981	R. E. Witters (OR)	"
*At-large member of Exec. Comm.	12/1981	J. B. Kendrick (CA)	"
* " "	12/1981	J. S. Robins (WA)	"
*Treasurer	12/1981	J. R. Welsh (MT)	1-yr. term; may serve successive terms
*Director-at-Large	indef.	M. T. Buchanan (D.C.)	ex-officio
Recording Secretary	indef.	J. E. Moak (CA)	ex-officio
*ESCOP	11/1981	R. J. Miller (ID)	3 representatives from each Region serving staggered 3-yr. terms
	11/1982	D. D. Johnson (CO)	
	11/1983	L. N. Lewis (CA)	
Alternate ESCOP Legislative Sub.	11/1981	C. E. Clark (UT)	2 representatives from each region serving staggered 3-yr. terms
	11/1981	---	
	11/1982	R. J. Miller (ID)	
	11/1983	L. N. Lewis (CA)	
ESCOP Liaison Sub.	indef.	M. T. Buchanan (D.C.)	4 DALs plus ESCOP Chairman
ESCOP Interim Sub.	11/1981	R. J. Miller (ID)	ESCOP Chmn & Vice-Chmn, Leg. Sub.
	11/1981	D. D. Johnson (CO)	Chmn, plus senior ESCOP representative from each Region
ESCOP Home Economics	11/1984	H. F. McHugh (CO)	4-yr. term
ESCOP Marketing Sub.	11/1982	H. J. Tuma (WY)	3-yr. term.
ESCOP Seed Policy Sub.	indef.	W. H. Foote (OR)	indefinite term
ESCOP Energy Sub.	indef.	J. R. Davis (OR)	indefinite term
ESCOP Pest Control Strategies Sub.	indef.	D. J. Lee (WA)	indefinite term
ESCOP IPM Sub.	indef.	R. J. Miller (ID)	indefinite term
Experiment Station Section Officer	11/1981	L. L. Boyd (WA)	4 officers of the Section rotate among the 4 regions
Research Implementation Comm. (RIC) - Chmn.	12/1981	L. W. Dewhirst (AZ)	4 members serving staggered 4-yr. terms; Chairman may serve two successive terms. Also serve as SAES members of W. Research Comm.
	12/1982	H. F. McHugh (CO)	
	12/1983	D. E. Schlegel (CA)	
	12/1984	L. L. Boyd (WA)	
Committee of Nine	12/1981	D. L. Oldenstadt (WA)	2 representatives from each region serving staggered 3-yr. terms
	12/1982	---	
	12/1983	L. W. Dewhirst (AZ)	
Alternate	12/1981	R. A. Young (NV)	
Board of Directors, W. Rural Dev. Center	indef.	J. R. Davis (OR)	Oregon SAES Director plus 2 representatives serving 2-yr. terms;
	12/1981	D. W. Bohmont (NV)	may serve a second 2-yr. term
	12/1982	D. J. Matthews (UT)	
Liaison Rep. to W. Extension Directors	12/1981	D. W. Bohmont (NV)	3-yr. term
Liaison Rep. to W. Resident Instruc.	12/1981	L. S. Pope (NM)	SAES Director in state where RI holding its annual meeting

WDA OFFICERS AND REPRESENTATIVES

OFFICE	TERM ENDS	REPRESENTATIVE OR NOMINEE	REMARKS
W. Regional Council	12/1983	D. L. Oldenstadt (WA)	3-yr. term
Co-chairman of Western Research Committee	12/1983	D. L. Oldenstadt (WA)	3-yr. term
RPG Co-chairmen and Members:			1 Co-chairman and 2 members for each RPG, serving staggered 3-yr. terms
RPG-1 Natural Resources Chmn.	12/1982 12/1981 12/1983	R. A. Young (NV) R. M. Hagan (CA) W. R. Butcher (WA)	
RPG-2 Forest Resources Chmn.	12/1981 12/1982 12/1983	J. M. Hughes (CO) B. B. Stout (MT) C. R. Hatch (ID)	
RPG-3 Crops Chmn.	12/1984 12/1982 12/1983	W. H. Foote (OR) S. M. Alcorn (AZ) -vacant-	
RPG-4 Animals Chmn.	12/1983 12/1981 12/1982	H. J. Tuma (WY) R. L. Preston (WA) R. L. Baldwin, Jr. (CA)	
RPG-5A Food & Human Nutrition Chmn.	12/1981 12/1981 12/1982	D. J. Lee (WA) P. E. Kifer (OR) B. R. Standal (HI)	
RPG-5B People, Communities Chmn.	12/1981 12/1982 12/1983	R. R. Rice (AZ) C. Ching (NV) R. C. Youmans (OR)	
RPG-6 Economics Chmn.	12/1983 12/1981 12/1982	R. S. Firsch (AZ) L. M. Eisgruber (OR) M. E. Wirth (WA)	
Interim National Research Planning Com.	indef.	M. T. Buchanan (D.C.)	4 DALs plus 4 USDA
Nat'l Cotton Coord. Comm.	indef.	L. N. Lewis (CA)	indefinite term
Western IR-4 Rep. to Tech. Comm.	indef.	J. N. Seiber (CA)	indefinite term
Joint Council	4/1981 4/1983	J. S. Robins (WA) J. P. Jordan (CO)	Staggered 3-yr. terms



WRDC

APPENDIX I

Western Rural Development Center • Oregon State University • Corvallis, OR 97331 • (503-754-3621)

July 30, 1980

TO: Western Experiment Station Directors

SUBJECT: A Brief Report

The annual funding concern continues, although many of you have assisted in keeping Title V, the Centers, and community development interests before Land Grant, USDA, and Congressional leadership. I thank you for this continuing support, and I know it is much appreciated by your own community development faculty involved in rural development issues. Undoubtedly, you will receive a more up to date report at the meeting, but it is my understanding as of now that HR 3580 and S 892 are in the legislative process to continue the authorization for Title V. Mr. Whitten has protected the Title V funds by shifting them to Smith-Lever and Hatch appropriation budgets, anticipating that the expected passage of HR 3580 would restore the funds to the normal Title V budgets. This is important to the WRDC, as it would be unclear how the rural development centers would be funded under Smith-Lever or Hatch formulas.

As further background, Senator Leahy--Vermont--continues to work toward rewriting Title V along the lines of last November's recommendation from the Land Grant Association. This would involve \$75,000 minimum per state (with no reduction to those states currently receiving more) and a simplification of the required administration. It is my understanding that he has made two requests to USDA for assistance in drafting this legislation. I can only hope that USDA will meet this request soon.

The states continue to support WRDC projects through contributions of faculty time, as evidenced by two projects now underway. The first is a research program on alternatives for primary health care for rural areas, in which the states of California, Idaho, Arizona, and Pennsylvania are involved. (Very little regional funds go to Penn State). The second project is a demonstration project joining rural libraries in Extension for more effective delivery of education programs in our areas with rapidly growing communities, although the methods would apply elsewhere. Utah, Wyoming, Idaho, Alaska, Colorado, and Montana are involved. Of prime interest is developing a proposal for longer term funding through a private foundation.

Mt. St. Helens has slowed progress on summary work for the community needs survey research project, but the data were all collected on time this fall and analysis is underway. Washington and Oregon carry the major responsibility for work on this project, and the pressure from St. Helens has diverted some attention. I feel that this may be our best research investment to date and will result in strong educational materials on community surveys for Extension and research workers.

Western Experiment Station Directors
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July 30, 1980

As the Board of Directors reviewed the WRDC expenditure record, they strongly advised that we not begin any new projects until money was in hand from the 1981 appropriations. Sufficient funds exist to complete existing projects, but we are holding up on generating any new ones; specifically, we are starting no new seed projects. The WRDC remains active, however, with two major activities demanding increasing amounts of attention.

The first major activity is the Kellogg project, involving an Extension homemakers' proposal for increased leadership development in public policy. Those of you in the six states involved have received correspondence summarizing the immediate tasks required to keep this proposal moving with the Kellogg Foundation. In short, Washington, Hawaii, Alaska, Oregon, Colorado, and New Mexico along with the WRDC are making changes in the proposal at Kellogg's recommendation. These changes involve looking at a three-year rather than a six-year time span for the project. With relatively minor adjustments, the proposal will be amended and we feel that the proposal remains quite interesting. This would be a major Extension undertaking involving home economics and community development in an integrated program.

The second event is a real challenge. The WRDC was approached by USDA and the Department of Energy to provide leadership for a 4½ year research program on the local rural communities' social economic impacts from nuclear waste isolation siting. With the central theme of the WRDC being coping with the impacts on rural areas, this major national challenge fits with existing research interest and certainly with the Extension concerns of coping with community growth. This contract has been signed, amounting to over \$225,000 for this fiscal year and increases considerably in subsequent years. The research team is a national one. Major components will be handled at North Dakota State University and at Texas A&M University. Both Extension and research faculty from the West have been identified and are currently being involved or being asked of their interest in involvement in this research program.

The nuclear waste isolation study is to look at this national issue from the vantage of the small rural communities, which are the most likely sites for this isolation. As most of you realize, many of the geologic formations of high interest for these sites are in the western states.

Finally, a brief report on the use of WRDC publications authored by your faculty and also a brief summary of some of the faculty input in WRDC projects are included here. I might say that the Coping with Growth publications have gone across the nation and have received more positive response than any educational materials I have been associated with to date. This Coping with Growth project was also selected as winner of the Western Agricultural Economics Association Extension program award at the recent July meetings in Las Cruces.

WRDC CAP PROJECTS

Faculty Contribution from Western States (\$)*

	Bonds	Small Farms	Coping	Alternatives for Youth	Survey Methods	Primary Health Care	Rural Libraries	Total
ALASKA								----
ARIZONA			5,000	10,500				15,500
CALIFORNIA			15,000	3,650		9,478		28,128
COLORADO	4,035	15,600	1,000		1,680		2,083	24,398
HAWAII		17,800						17,800
IDAHO			27,000			9,490	2,304	38,794
MONTANA		3,600				10,340	2,083	16,023
NEVADA			5,000	1,143				6,143
NEW MEXICO		15,000						15,000
OREGON		12,500	13,000	2,575	10,680			38,755
UTAH							11,038	11,038
WASHINGTON	8,425		47,000		19,200			74,625
WYOMING			13,000	3,000	1,680		2,392	20,072
TOTAL	\$12,460	\$64,500	\$126,000	\$20,868	\$33,240	\$29,308	\$19,900	\$306,276

WRDC \$

Contribution \$19,066 \$43,550 \$ 39,140 \$31,085 \$45,300 \$59,130 \$24,350 \$261,621

*Does not include the faculty contributions to the 44 seed projects active to date

"COPING WITH GROWTH" SERIES

Bulk Orders from the Western States**

	16	17	20	21	22	23	24	25	26	29	30	total
	50	50	50	50	50	50	50	50	50	50	50	550
	200	200	500	400*	200*	200	500	200	300	200	200	3,100
ALA	1,000	1,400	950	950	950	950	950*	550	550	550	550	9,350
	235	235	235	235	235	235	235	235	235	200	200	2,515
	200	200	300	300	300	200	200	200	200	200	200	2,500
	815	815	515	215	215	500	500	200	515*	515*	500*	5,305
	500	500	500	500	500	500	300	400	300	250	250	4,500
	200	200	200	200	200	200	200	200*	200	200*	200	2,200
CO	200	200	200	200	200	200	200	200	200	200	200	2,200
	2,200*	200*	1,500	300	200	200	1,500	300	500	400	500	7,800
	200	200	100	100	100	100	100	100	100	100	100	1,300
ON	4,045	4,045	4,045*	4,045	2,045	2,015*	4,039	4,039	4,039	2,000	2,000	36,357
	200	220	200	400	400	200	200*	200	200	200	200	2,620
ERS												
STATES	10,045	8,465	9,295	7,895	5,595	5,550	8,974	6,874	7,389	5,065	5,150	80,297
PIES	12,000	12,000	11,500	11,000	9,500	8,000	9,500	10,000	10,500	9,000	8,000	116,000

* s authorship from respective states

do not reflect individual requests

APPENDIX J

J-81

TOWARD THE YEAR 2000:
THE CHALLENGE FOR AGRICULTURAL RESEARCH

for delivery by
Congressman George E. Brown, Jr.

at the joint meeting of the
Western Experiment Station Directors
and
Western SEA-Agricultural Reserach Acministrators

August 8, 1980
Monterey, California

TWO WEEKS AGO, THE COUNCIL ON ENVIRONMENTAL QUALITY AND THE STATE DEPARTMENT DELIVERED A STUDY ON GLOBAL POPULATION AND NATURAL RESOURCE TRENDS PROJECTED THROUGH THE YEAR 2000. THIS STUDY, TITLED "GLOBAL 2000", MADE PESSIMISTIC PREDICTIONS ABOUT THE NEXT TWENTY YEARS, EVEN THOUGH IT USED THE MOST OPTIMISTIC SCENARIOS ABOUT POPULATION TRENDS, FOOD PRODUCTION AND ENERGY AVAILABILITY. IT PAINTS A PICTURE OF MORE PEOPLE WITH LESS LAND COMPETING FOR FEWER RESOURCES. IT IS A DISTURBING PICTURE.

BUT THERE IS ENOUGH DOOM AND GLOOM THESE DAYS TO SEND EVEN THE MOST RATIONAL PERSON BURROWING INTO THE BEDROCK FOR SAFETY. WE CAN EITHER VIEW THE CHANGES FACING US AS A THREAT AND TRY TO AVOID THEM OR WE CAN VIEW THESE CHANGES AS A CHALLENGE AND TAKE ADVANTAGE OF THEM. IT IS MY HOPE THAT WE CAN RATIONALLY APPROACH THE PROBLEMS FACING US AND AVOID THE PANIC THAT PREVAILS IN NEWSPAPER HEADLINES.

THE LAST THIRTY YEARS HAVE BEEN GOOD TO AGRICULTURE IN THIS COUNTRY THANKS TO THE FINE WORK DONE BY OUR AGRICULTURAL RESEARCH AND EXTENSION SYSTEM. BUT THE POST WORLD WAR II BOOM, THE CHEMICAL AND MECHANICAL REVOLUTION IN AGRICULTURE, IS BASED UPON THE IDEA THAT WE HAVE LIMITLESS RESOURCES - ENERGY, WATER, SOIL - AND NOW WE ARE FACED WITH LIMITS TO THESE. THIS NEW REALITY WILL UNDOUBTEDLY FORCE CHANGES IN THE STRUCTURE AND PRACTICE OF AGRICULTURE OVER THE NEXT TWENTY YEARS.

GOVERNMENT IS A REACTIVE ENTITY AND USUALLY RESPONDS TO CHANGE RATHER THAN CREATES IT. IN TIMES SUCH AS THESE WHEN WE ARE EXPERIENCING SUCH RAPID CHANGE, GOVERNMENT BECOMES A REACTIONARY ENTITY, RETURNING TO PAST SOLUTIONS IN APPARENT DISREGARD OF THE FACT THAT THE NATURE OF THE PROBLEM HAS CHANGED. WE IN GOVERNMENT NEED MORE THAN EVER THE SKILLS OF SCIENTISTS AND RESEARCHERS, ESPECIALLY IN THE VITAL AREA OF FOOD PRODUCTION, TO IDENTIFY THE MAJOR PROBLEMS FACING US AND TO SEEK SOLUTIONS TO THEM.

PERHAPS WE SHOULD TAKE SOME TIME AT THIS POINT AND EXAMINE SOME OF THE OBVIOUS PROBLEMS FACING US.

IT IS IMPOSSIBLE TO GO TO ANY SECTOR OF OUR COMPLEX AGRICULTURAL PRODUCTION, PROCESSING, MARKETING AND TRANSPORTATION SYSTEM AND NOT SEE THE EFFECTS OF INCREASING ENERGY PRICES. WHAT WILL BE THE EFFECT OF INCREASING FOSSIL FUEL PRICES OVER THE NEXT TWO DECADES? WILL PRICES OF AGRICULTURAL PRODUCTS CONTINUE TO RISE AND BE PAID BY CONSUMERS, OR WILL ALTERNATIVES EMERGE THAT WILL CHANGE THE STRUCTURE OF AGRICULTURE?

IN THE PRODUCTION AREA, INCREASING PRICES FOR FOSSIL FUELS AND PETROCHEMICAL PRODUCTS WILL CAUSE GREAT CHANGES. FERTILIZER USE HAS DECLINED 18% OVER LAST YEAR AND IS A TREND TO BE WATCHED VERY CLOSELY. THE EFFECTS, IF ANY, OF LOWER FERTILIZER USE WILL NOT SHOW UP FOR ONE OR TWO CROP YEARS.

WE NEED TO START NOW TO EXAMINE THIS DOWNTURN AND ITS LONGER TERM IMPLICATIONS.

PESTICIDE PRICES ARE UP, AND THIS IS BRINGING ABOUT ALTERNATIVE APPLICATION STRATEGIES SUCH AS CLOSER PEST MONITORING AND THE DEVELOPMENT OF INTEGRATED PEST MANAGEMENT SCHEMES. MORE WORK NEEDS TO BE DONE IN THIS AREA SINCE IT IS LIKELY THAT ECONOMICS WILL PRECLUDE THE INTENSIVE LEVELS OF CHEMICAL PESTICIDE USE THAT WE HAVE SEEN IN THE PAST.

FUEL PRICES ARE HURTING FARMERS, AFFECTING THE COST OF OPERATING EQUIPMENT, PUMPING WATER, AND PRACTICALLY EVERY OTHER FARM FUNCTION. HIGHLY MECHANIZED FARMING OPERATIONS MAY FACE GREATLY INCREASED PRODUCTION COSTS REQUIRING MORE EFFICIENCY BEING BUILT INTO EQUIPMENT OR ALTERNATIVE FUELS BEING USED. HIGHER PRICES MAY RESULT AND MAY AFFECT PURCHASING PATTERNS BY CONSUMERS.

THE IMPACT OF ENERGY PRICES ON THE REST OF OUR PRESENT COMPLEX FOOD MARKETING AND TRANSPORTATION SYSTEM NEEDS ATTENTION AS WELL. THE TRANSPORTATION PROBLEMS THAT WERE EXPERIENCED DURING THE 1979 CROP SEASON WERE VERY SERIOUS AND POINTED OUT THE VULNERABILITY OF OUR FOOD MARKETING SYSTEM TO FUEL DISRUPTION PROBLEMS. THE CLOSING OF MANY RAIL LINES IN RURAL AREAS WILL FORCE EVEN MORE DEPENDENCE UPON TRUCKING PRODUCTS TO MARKET AND MAY MAKE THE NEXT SHORTAGE OF DIESEL FUEL EVEN MORE SERIOUS.

BUT EVEN WITH A DEPENDABLE SUPPLY OF FOSSIL FUELS, ENERGY COSTS WILL CONTINUE TO RISE, AFFECTING OUR AGRICULTURAL SYSTEM. WHAT HAPPENS WHEN ENERGY PRICES CAUSE PACKAGING AND TRANSPORTATION COSTS TO EQUAL THE COST OF PRODUCTION FOR A FOOD ITEM? WHAT HAPPENS, FOR INSTANCE, WHEN THE COST OF TRANSPORTING A CALIFORNIA TOMATO TO NEW JERSEY EQUALS THE COST OF RAISING THE TOMATO IN THE FIRST PLACE? WILL WE SEE A RESURGENCE OF THE NEW JERSEY AND PENNSYLVANIA TRUCK FARMS THAT WERE DRIVEN OUT OF BUSINESS BY THE MECHANIZED EFFICIENCY OF THE CALIFORNIA INDUSTRY? WILL AGRICULTURAL PRODUCTION CLOSER TO EVENTUAL MARKETS ON SMALLER OPERATIONS REAPPEAR?

I HAVE NO ANSWERS TO THESE QUESTIONS NOR THE SCORES OF OTHERS THAT ARISE WHEN ONE BEGINS TO PONDER THE POSSIBLE EFFECTS OF ENERGY COSTS ON AGRICULTURE. I HAVE SEEN USDA STUDIES THAT CONCLUDE THAT ONLY THOSE OPERATIONS WILLING TO ASSUME RISK AND INNOVATE WILL BE ABLE TO SURVIVE SOME OF THE SHIFTS BEING FORCED UPON US BY CHANGES IN ENERGY SUPPLY AND PRICES. MUCH OF THIS INNOVATION NEEDS TO COME FROM OUR AGRICULTURAL RESEARCH SYSTEM.

IN OUR SYSTEM OF AGRICULTURE, AS IN ANY DEVELOPED SYSTEM, THERE IS INERTIA THAT WILL PRESERVE THE STATUS QUO BEYOND THE POINT WHERE A RATIONAL, DETACHED OBSERVER WOULD NOTICE PROBLEMS DEVELOPING AND INSTITUTE CHANGES IN THE SYSTEM.

THE MYOPIC, INCREMENTAL VIEW OF CHANGE THAT SO-CALLED POLICY-MAKERS ARE FORCED TO TAKE FREQUENTLY PREVENTS US FROM SEEING WHERE WE ARE GOING UNTIL WE RUN INTO A WALL. SOUND, FORWARD LOOKING RESEARCH MUST GUIDE US AND KEEP US ONE CAR LENGTH AWAY FROM THE WALL. THIS RESEARCH MUST BE SENSITIVE TO THE EARLY SIGNS OF PROBLEMS DEVELOPING AND ALWAYS KEEP IN MIND THE LAG BETWEEN THE START OF RESEARCH IN AN AREA AND THE TIME OF ITS APPLICATION.

AN EXAMPLE OF AN AREA THAT NEEDS THIS SENSITIVITY IS THE REVERSE SIDE OF THE ENERGY SHORTAGE QUESTION, THE PRODUCTION OF FUELS FROM BIOMASS. THE USE OF AGRICULTURAL AND SILVICULTURAL PRODUCTS TO PRODUCE ENERGY WILL RECEIVE INCREASING ATTENTION AS OTHER FORMS OF ENERGY PRODUCTION CONTINUE TO BE LIMITED. CAREFUL STUDY NEEDS TO BE MADE OF THE LONG TERM EFFECTS OF THE DEVELOPING ENERGY AGRICULTURE INDUSTRY.

WILL ALCOHOL FEEDSTOCKS REQUIRE INCREASED PRODUCTION ACREAGE AND EXPANDED PRODUCTION ONTO MARGINAL LANDS? WHAT IS THE EFFECT ON SOIL QUALITY OF REMOVING TIMBER WASTE OR CROP STUBBLE FOR FUEL PURPOSES? CAN WE DEVELOP FEEDSTOCKS THAT ARE APPROPRIATE TO THE AGROCLIMATIC REGIONS OF THE WEST, ALASKA, HAWAII AND GUAM, THE AREAS REPRESENTED HERE TODAY? CAN WE DEVELOP FUEL PRODUCTION SYSTEMS THAT CAN USE FOOD PROCESSING WASTES OR THE 13 MILLION TONS OF FRUITS AND

VEGETABLES THAT ARE CULLED FROM CALIFORNIA PRODUCTION? .
THE LIST OF UNKNOWNNS INVOLVED IN BIOMASS PRODUCTION GOES
ON, AND IT WILL FALL UPON AGRICULTURE RESEARCHERS TO ANSWER
THESE QUESTION.

QUESTIONS ABOUT THE FUTURE AVAILABILITY OF WATER ARE
JUST AS IMPORTANT AS ENERGY AVAILABILITY FOR AGRICULTURE
IN THE WEST. IT IS HARD FOR MANY OF MY EASTERN COLLEAGUES
TO UNDERSTAND THE KEY ROLE THAT WATER PLAYS IN WESTERN
AGRICULTURE OR TO MAKE SENSE OF THE DISRUPTIVE DEBATES THAT
WE FREQUENTLY GET INTO OVER WATER SUPPLY QUESTIONS. IT IS
EVEN HARDER TO OBTAIN A CONSENSUS AMONG MY WESTERN COLLEAGUES
ON THESE SAME QUESTIONS.

THE EMERGING PROBLEMS OF WATER SUPPLY AND QUALITY IN
THE COLORADO RIVER BASIN CAUSE ME GREAT CONCERN. I HAVE
BEEN PUSHING FOR SOME TIME TO HAVE A GREATER EMPHASIS
PLACED ON SOLVING SOME OF THESE PROBLEMS BUT INSTEAD HAVE
SEEN THE FEDERAL GOVERNMENT EXACERBATE THE SITUATION WITH
MAJOR SYNFUELS PROJECTS, THE COAL SLURRY PIPELINE, AND THE
MX MISSILE SYSTEM. ALL OF THESE PROJECTS WILL COMPETE WITH
AGRICULTURE FOR EXISTING WATER AT A TIME WHEN MAINTAINING
WATER SUPPLY AND QUALITY LEVELS FOR CURRENT USES IS ALREADY
EXTREMELY DIFFICULT.

OTHER AREAS OF THE WEST ARE FACING SERIOUS PROBLEMS
WITH WATER MINING, A PROBLEM MADE WORSE BY OUR INADEQUATE

KNOWLEDGE ABOUT AQUIFER CAPACITY, LOCATION AND RECHARGE RATES. SOME OF THESE AQUIFERS HAVE BECOME CONTAMINATED BY AGRICULTURAL CHEMICALS - I HAVE A NUMBER OF DBCP CONTAMINATED WELLS IN MY DISTRICT - AND MORE WORK NEEDS TO BE DONE IN THIS AREA. SOIL SALINITY AND SALINE SEEPS AFFECT LARGE PARTS OF THE WEST, REQUIRING MUCH WORK ON THE DEVELOPMENT OF TECHNOLOGIES FOR MITIGATION OF EXISTING DAMAGE AND PREVENTION OF FUTURE DAMAGE.

IN MANY RESPECTS, WATER PROBLEMS IN THE WESTERN UNITED STATES PARALLEL THE ENERGY PROBLEMS BEING EXPERIENCED IN AGRICULTURE THROUGHOUT THE COUNTRY. WE PROCEEDED FOR YEARS AS IF WATER WERE A LIMITLESS RESOURCE, MUCH AS WE DID WITH OIL. WE FOCUSED ON THE SUPPLY OF WATER, DRILLING NEW WELLS AND BUILDING MORE DAMS AND CANALS, WHEN EXPANDED OPERATIONS DEMANDED MORE WATER. NOW WITH WATER, AS WITH ENERGY, WE FIND THAT MUCH GREATER EFFICIENCY IS NEEDED, AND WE MUST SHIFT TO A CONSERVATION STRATEGY.

THIS WILL BE AN EXPENSIVE PROGRAM, REQUIRING CAREFUL PLANNING TO INSURE THE PROPER USE OF LIMITED FUNDING. APPLICATION OF NEW IRRIGATION SYSTEMS WILL BE NEEDED. INVENTORIES OF AREAS AFFECTED BY SOIL SALINITY WILL BE NEEDED. MAJOR WORK ON CONSERVING WATER LOSS IN RESERVOIRS, CANALS, AND LATERALS IS REQUIRED. SINCE WE CAN NO LONGER "BUY" NEW WATER THROUGH MAJOR RECLAMATION PROJECTS, WE SHOULD LOOK

AT SHIFTING THE EMPHASIS OF THESE PUBLIC WORKS PROGRAMS TO "BUY" ADDITIONAL WATER THROUGH CONSERVATION. AN EVALUATION OF THE EFFECTIVENESS OF EXISTING COST-SHARING PROGRAMS IS NEEDED SINCE THEY WILL HAVE A MAJOR ROLE TO PLAY.

WE NEED TO LOOK AT DIFFERENT STRATEGIES TO BE USED IN DRY AREAS OF OUR COUNTRY, SUCH AS THE DEVELOPMENT OF DROUGHT AND SALINE RESISTANT PLANT STRAINS. IF WATER SUPPLY AND QUALITY CONTINUE TO DECLINE, MANY CROPS CURRENTLY RAISED IN IRRIGATED ACREAGE MAY NO LONGER BE COMMERCIALY VIABLE CROPS. REPLACEMENT CROPS SUCH AS GUAYULE, JOJOBA AND A NUMBER OF OTHER PLANTS INDIGENOUS TO THESE AREAS SHOULD BE EXPLORED FURTHER.

SOIL EROSION IS A MAJOR THREAT TO THE CONTINUED HEALTH OF OUR AGRICULTURAL SYSTEM. THE CHANGING NATURE OF AGRICULTURE TO LARGER, CENTRALIZED OPERATIONS HAS ELIMINATED MANY OF OUR SOIL CONSERVATION STRATEGIES DEVELOPED DURING THE DUST BOWL DAYS. WINDROWS AND TERRACES ARE INCOMPATIBLE WITH CENTER PIVOT IRRIGATION SYSTEMS AND OTHER MODERN FARMING EQUIPMENT. CROP ROTATION PATTERNS, FALLOW ACREAGE, STRIP CROPPING AND OTHER CULTURAL SOIL CONSERVATION TECHNIQUES HAVE FALLEN VICTIM TO CROPPING DECISIONS MADE FROM AN ECONOMIC VIEWPOINT RATHER THAN A CONSERVATION VIEWPOINT. THE GREAT CHALLENGE FACING US NOW IS TO ADAPT SOIL CONSERVATION STRATEGIES AND PROGRAMS TO ACCOMODATE THE CURRENT REALITIES. WE CANNOT AFFORD TO LET CURRENT RATES

OF SOIL EROSION CONTINUE.

CHANGING PATTERNS OF FARM LAND OWNERSHIP MAY ALSO AFFECT THE IMPLEMENTATION OF SOIL CONSERVATION PROGRAMS. WITH MUCH LAND OWNED BY OFF-FARM INTERESTS, CROPPING AND REINVESTMENT DECISIONS ARE FREQUENTLY MADE IN CITIES DISTANT FROM THE FARMING OPERATION. EVEN WITH THE PRESENCE OF SKILLED FARM MANAGERS, DECISIONS MADE AFFECTING RESOURCE CONSERVATION MAY REFLECT MARKET FORCES RATHER THAN A NEED TO MAINTAIN THE SOIL BASE. THE LARGE AMOUNTS OF LAND OWNED BY THE FEDERAL GOVERNMENT IN THE WEST ADDS ANOTHER ELEMENT TO DEVELOPING COMPREHENSIVE RESOURCE PROTECTION SCHEMES.

AT THE SAME TIME AS SOIL QUALITY IS DECLINING, MUCH PRODUCTIVE LAND IS DISAPPEARING UNDER ASPHALT AND BEING DIVERTED TO NON-AGRICULTURAL USES. HOW DO WE CONTROL THE PRESSURES BRINGING ABOUT THIS CONVERSION OF SOME OF OUR MOST FERTILE LAND? HOW DO WE BALANCE THE FORCES COMPETING FOR THIS LAND?

THIS SHORT LIST OF THE PROBLEMS FACING AGRICULTURE AND SILVICULTURE IN THE WEST, AND THE REST OF THE COUNTRY, IS JUST A START AT DETAILING ISSUES THAT NEED THE ATTENTION OF AGRICULTURAL RESEARCHERS. GIVEN THE FACT THAT WE ARE FACED WITH LIMITED FUNDING FOR MANY OF THESE EFFORTS, WE

MUST DO AN EFFECTIVE JOB OF PLANNING AND DEVELOPING NEW STRATEGIES FOR SOLVING THESE DIFFICULTIES.

WITH THE CHANGES THAT WE WILL BE FACED WITH IN THE REST OF THIS CENTURY, OUR PLANNING MUST BE DONE MORE EFFECTIVELY THAN IT HAS BEEN IN THE PAST. THIS COUNTRY ABOUNDS WITH EXAMPLES OF SECTORS OF OUR ECONOMY THAT HAVE FAILED THE TEST OF CHANGE - THE AUTO INDUSTRY, THE STEEL INDUSTRY, THE SHOE INDUSTRY, AND SO ON DOWN THE FRONT PAGE OF THE WALL STREET JOURNAL. WE MUST PREVENT THE AGRICULTURE INDUSTRY FROM JOINING THIS LIST. BUT FIRST WE MUST AVOID THE USUAL DEFENSIVE ATTITUDE OF AN ESTABLISHED SYSTEM AND VIEW CHANGE AS AN OPPORTUNITY RATHER THAN A THREAT.

EVERY YEAR I SEE AGRICULTURAL RESEARCH AND EXTENSION FUNDS SUFFER RELATIVE TO OTHER GOVERNMENT RESEARCH FUNCTIONS. I HAVE SEEN THE COMPETITION THAT TAKES PLACE FOR THIS SUPPOSED FIXED POT OF FUNDS AS IF THERE WERE SOME ADVERSARY ROLE BETWEEN THE HATCH ACT FUNDS AND COMPETITIVE GRANT FUNDS AND SMITH-LEVER ACT FUNDS. THE PLAIN TRUTH IS THAT THE AGRICULTURE SECTOR IS FAILING TO MAKE ITS CASE WITH OMB AND CONGRESS.

THOSE CONCERNED ABOUT AGRICULTURE'S FUTURE IN THIS COUNTRY MUST REVERSE THE EROSION OF SUPPORT FOR AGRICULTURAL RESEARCH THAT HAS OCCURRED OVER THE LAST FEW YEARS. THE AGRICULTURAL SECTOR MUST BRIDGE THE GAP BETWEEN PRODUCER

AND CONSUMER THAT HAS RESULTED FROM OUR COMPLEX FOOD MARKETING AND DISTRIBUTION SYSTEM AND FROM THE URBANIZATION OF LARGE AREAS OF OUR COUNTRY. WE MUST BUILD A NEW CONSTITUENCY IN URBAN AREAS TO REPLACE THE LOSS OF SO MANY FARMS AND THE SUPPORT THAT THOSE FARM FAMILIES ONCE PROVIDED FOR AGRICULTURAL ISSUES. CONSUMERS AND URBAN RESIDENTS HAVE A VITAL STAKE IN AGRICULTURE RESEARCH AND EXTENSION OPERATIONS AND NEED TO BE MADE MORE AWARE OF THIS. BUT WHAT STRATEGIES SHOULD THE AGRICULTURAL SECTOR EMPLOY TO DEAL WITH SOME OF THE PROBLEMS TOUCHED UPON EARLIER?

-- LOOK AROUND FOR PARALLEL SOURCES OF FUNDING. IN FY '77 THE NATIONAL SCIENCE FOUNDATION FUNDED \$206 MILLION IN PLANT SCIENCE RESEARCH, \$3 MILLION OF WHICH WAS ON BIOLOGICAL NITROGEN FIXATION. THIS MONEY AND ELEMENTS OF FUNDING IN OTHER GOVERNMENT AGENCIES HAVE NOT TRADITIONALLY BEEN INCLUDED IN DISCUSSIONS ON AGRICULTURAL RESEARCH. USE THE COMPETITIVE GRANTS PROGRAM TO BRIDGE THAT RESEARCH INTO THE EXISTING AGRICULTURAL RESEARCH SYSTEM AND TO TAP OTHER RESEARCH FUNDING OUTSIDE OF THE TRADITIONAL AR AND CR FUNDING.

-- BEGIN TO FOCUS RESEARCH ON LESS RESOURCE INTENSIVE FORMS OF AGRICULTURE. MUCH OF OUR PRESENT AGRICULTURE IS MANIPULATIVE. BY THAT I MEAN THAT THE ENVIRONMENT IS MANIPULATED TO ACCOMMODATE A PLANT OR CROP TYPE. THIS REQUIRES

LARGE ENERGY AND WATER INVESTMENTS, INVESTMENTS THAT WILL BECOME MUCH MORE COSTLY IN THE NEAR FUTURE. WE NEED TO DEVELOP A MORE ADAPTIVE FORM OF AGRICULTURE WHEREIN THE PLANT IS ADAPTED TO THE EXISTING AGROCLIMATIC CONDITIONS AS CLOSELY AS POSSIBLE AND RESOURCE INVESTMENTS ARE KEPT TO A MINIMUM. THIS INVOLVES DEVELOPING DROUGHT AND SALINE TOLERANT PLANTS IN SOME INSTANCES, COLD TOLERANT STRAINS IN OTHER AREAS. THE EMERGENCE OF A LARGE BIOENGINEERING INDUSTRY WILL ADD MANY NEW APPROACHES TO OUR AGRICULTURE PROBLEMS AND WORK IN THAT AREA SHOULD BE WATCHED CLOSELY.

-- MORE ATTENTION NEEDS TO BE PAID TO LONG-TERM CHRONIC YIELD LOSS MONITORING. LOSSES UNDER TEN PERCENT FREQUENTLY OCCUR WITHOUT ANY VISIBLE SIGNS OF PLANT STRESS. THERE IS OFTEN NO WAY OF DETECTING THE REASON FOR THESE LOSSES, WHETHER THEY ARE DUE TO NUTRIENT DEFICIENCY, AIR POLLUTION, OR OTHER REASONS. BUT THESE SMALLER SCALE LOSSES ARE FREQUENTLY HARBINGERS OF GREATER LOSSES TO COME IF THE SITUATION IS ALLOWED TO CONTINUE. EARLY DETECTION OF PROBLEMS WILL PROVIDE THE ADVANCE TIME NEEDED TO EFFECT A SOLUTION.

-- USE THE BOOM IN INFORMATION AND COMMUNICATIONS TECHNOLOGY TO EXPAND EXTENSION FUNCTIONS. THE GREEN THUMB AG-WEATHER SYSTEM THAT IS BEING LOOKED AT BY USDA CAN CHEAPLY TRANSMIT A VARIETY OF INFORMATION SUCH AS WEATHER FORECASTS, THE MONTHLY COUNTY EXTENSION LETTER, MARKET INFORMATION, PEST

MANAGEMENT STRATEGIES, AVAILABILITY OF CROP STORAGE SPACE AND OTHER INFORMATION. A SYSTEM SUCH AS THIS COULD BECOME AN ELECTRONIC EXTENSION NETWORK, SPEEDING SERVICES AND FREEING EXTENSION STAFF FOR OTHER NON-ROUTINE WORK.

THIS TECHNOLOGY COULD ALSO BE OF USE TO THE DEPARTMENT IN SOLVING THE DILEMMA OF THE NEED FOR CENTRALIZED PLANNING CONTRASTED WITH A DECENTRALIZED RESEARCH AND EXTENSION SYSTEM. COORDINATION OF RESEARCH, SYSTEM MANAGEMENT FUNCTIONS, BOOKKEEPING FUNCTIONS, COMMUNICATIONS NEEDS AND OTHER APPLICATIONS WOULD GREATLY BENEFIT USDA'S OPERATIONS AND HELP CUT COSTS.

-- USE INFORMATION TECHNOLOGY TO REPLACE RESOURCE INVESTMENTS. AN EXCELLENT EXAMPLE OF THIS IS FOUND IN INTEGRATED PEST MANAGEMENT SYSTEMS. BY MONITORING PEST INFESTATION LEVELS AND SPRAYING ONLY WHEN NECESSARY, PESTICIDE APPLICATIONS ARE KEPT TO A MINIMUM, AND MONEY AND ENERGY ARE SAVED. HERE, INFORMATION ABOUT PEST POPULATIONS IS IN EFFECT DISPLACING THE VOLUME OF CHEMICALS THAT WOULD HAVE BEEN USED WITHOUT THIS INFORMATION. BETTER WEATHER INFORMATION AND SOIL MOISTURE MONITORING CAN SAVE UNNEEDED IRRIGATION WATER. REMOTE SENSING INFORMATION ABOUT CROP HEALTH CAN DETECT PROBLEMS EARLY ENOUGH TO PREVENT LATER, LARGER PROBLEMS. OTHER APPLICATIONS ARE LIMITED ONLY BY THE IMAGINATION.

-- USE FOREIGN AGRICULTURAL DEVELOPMENT FUNDS IN USDA AND OTHER AGENCIES TO EXPLORE ALTERNATIVE FARMING SYSTEMS. NATIONS THAT ARE TWENTY YEARS BEHIND THE UNITED STATES IN PER CAPITA ENERGY USE MAY BE SEEN AS WELL TO BE TWENTY YEARS AHEAD OF THIS COUNTRY IF PREDICTIONS ABOUT THE NEEDED DOMESTIC REDUCTIONS IN ENERGY CONSUMPTION ARE TO BE MET. IN DEVELOPING AND APPLYING SUITABLE SYSTEMS OF AGRICULTURE IN LESS DEVELOPED COUNTRIES, SYSTEMS THAT RECOGNIZE LIMITED FOSSIL FUEL AVAILABILITY IN MANY OF THOSE COUNTRIES, WE PERFECT SYSTEMS OF AGRICULTURE AND AGRICULTURAL TECHNOLOGIES THAT MAY HAVE APPLICATION IN THIS COUNTRY.

ADVANCED IRRIGATION TECHNOLOGY DESIGNED TO AID DROUGHT-STRICKEN AREAS IN OTHER COUNTRIES MAY BE USEFUL FOR LARGE AREAS OF THE SOUTHWESTERN UNITED STATES THAT WILL BE FACING INCREASED PUMPING COSTS, WATER SHORTAGES, AND INCREASING SOIL SALINITY. INTEGRATED PEST MANAGEMENT SYSTEMS AIMED AT REDUCING THE USE OF EXPENSIVE PESTICIDES IN LESS DEVELOPED COUNTRIES HAVE VALUE IN THIS COUNTRY GIVEN THE FACT THAT NEARLY ALL OF OUR MAJOR CROPS AND MANY OF OUR INSECT AND PLANT PESTS ARE IMPORTED FROM OTHER COUNTRIES. DEVELOPING TECHNOLOGIES THAT DECREASE THE NEED FOR PETROCHEMICAL FERTILIZERS WILL HELP BOTH FARMERS IN DEVELOPING COUNTRIES AND IN THE U.S. DECREASE THEIR PRODUCTION COSTS.

IN ESSENCE, WHAT I AM TELLING YOU IS TO LOOK AT THESE

NAGGING PROBLEMS IN A NEW LIGHT, AS A GREAT CHALLENGE RATHER THAN A THREAT. WE HAVE MUCH TO BE PROUD OF IN AMERICAN AGRICULTURE. BUT WE CANNOT AFFORD TO REST ON PAST ACCOMPLISHMENTS. WE NEED TO USE EVERY TOOL AVAILABLE IN AGRICULTURAL RESEARCH AS WELL AS IN UNRELATED FIELDS MAKE IT THROUGH THE NEXT TWENTY YEARS WITH A MINIMUM OF DISRUPTION. INTERNATIONAL STABILITY AND OUR DOMESTIC ECONOMY WILL DEPEND MORE THAN EVER ON OUR AGRICULTURAL PRODUCTIVITY BY THE YEAR 2000. I HAVE FAITH THAT YOU ARE EQUAL TO THE TASK.