

MINUTES

**MONTANA HOUSE OF REPRESENTATIVES
52nd LEGISLATURE - REGULAR SESSION**

SUBCOMMITTEE ON EDUCATION & CULTURAL RESOURCES

Call to Order: By **CHAIRMAN PECK**, on January 30, 1991, at 8:00 am

ROLL CALL

Members Present:

Rep. Ray Peck, Chairman (D)
Sen. Greg Jergeson, Vice Chairman (D)
Sen. Don Bianchi (D)
Rep. Larry Grinde (R)
Sen. H.W. Hammond (R)
Rep. Mike Kadas (D)

Staff Present: Pam Joehler, Senior Fiscal Analyst (LFA)
Skip Culver, Associate Fiscal Analyst (LFA)
Mary Ann Wellbank, Budget Analyst (OBPP)
Melissa Boyles, Secretary

Please Note: These are summary minutes. Testimony and discussion are paraphrased and condensed.

Announcements/Discussion: **CHAIRMAN PECK** stated that OPI will be added to the Friday March 1st schedule for executive action.

014

SEN. BIANCHI stated that he spoke with Dr. Long from the MSU Nursing Program and she clarified that if MSU received the MOD there would be forty-five new nurses added in FY92 and forty-five in FY93. So, it would be a ninety person program but only forty five new students per year would graduate.

**HEARING ON AG EXPERIMENT STATION, EXTENSION SERVICE, AND
FIRE SERVICE TRAINING SCHOOL**

Tape No. 1

037

Michael Malone, President, Montana State University, stated that Montana is one of the states where agriculture figures most largely in the economy.

051

Max Amberson, Dean, College of Agriculture, distributed and reviewed pages 1 and 2 of a handout on the MSU Agricultural Experiment Station. **EXHIBIT 1**

Don Mathre, Acting Associate Dean of Research, reviewed pages 3

through 7. **EXHIBIT 1**

403

REP. GRINDE asked what the advantages of the new spring wheat, High-Line, are over the New Ana that is now grown. **Mr. Mathre** said it has the same yield potential, stem rust resistance, and 1% higher protein. The growing season is slightly lower.

421

SEN. JERGESON asked why the weed bill is not coming through the modification process. **Mr. Mathre** said the producers felt there were other ways that program could be funded.

431

CHAIRMAN PECK asked if Mr. Mathre was familiar with Rep. Steppler's grasshopper control bill. He said it was the same bill.

451

SEN. JERGESON asked **Mr. Mathre** if they expect to continue getting money from the Wheat and Barley Committee. He said the Wheat and Barley Committee has provided over half a million dollars in the past year. They are not aware of their future plans but are hopeful and optimistic that they will continue to support the Ag Experiment Station.

513

Dick Phillips, Assistant Director of the Extension Service, reviewed pages 8 through 14 of **EXHIBIT 1**.

857

Butch Weedon, Director, MSU Fire Training School, reviewed pages 15 through 17 of **EXHIBIT 1**.

968

CHAIRMAN PECK asked if there were an executive recommendation that would again reorganize the Fire Training School. **Mr. Weedon** said the Governor's budget proposal includes moving the Training School to the Department of State Lands. **CHAIRMAN PECK** asked Mr. Weedon if he has a position on the Governor's proposal. **Mr. Weedon** said the Training School has studied the issue and supports the move to the University System. The future for Fire Service Training lies with the MSU Extension Service. **CHAIRMAN PECK** asked Mr. Weedon to summarize the advantages and disadvantages of the proposed reorganization. **Mr. Weedon** said there would be a reduction in funding and that would result in a reduction of service. The disadvantages would be that the fire service program has been an education outreach program and the affiliation with an institution of higher learning makes organizational sense. Moving to an agency that is primarily responsible for the management of resources makes no sense. **CHAIRMAN PECK** asked what the proposal does to the Fire Service Training School. **Mr. Weedon** said he has seen very little information to what would be done.

016

REP. KADAS asked if there was a bill to do this. **Mr. Weedon** said he has not seen a bill introduced yet. **REP. KADAS** asked if it required a bill. **Mr. Weedon** said yes, they are a statutory agency and he thinks it would take statutory authority to do it.

REP. KADAS asked what the fees are for someone who receives the service. **Mr. Weedon** said they currently charge a \$58.00 per year membership fee to participate in the resource center library. If they are unable to pay this fee, they will not receive the service. **REP. KADAS** asked if organizations that can't afford the fee would go without the publications. **Mr. Weedon** said that a typical training aid is \$300, if an agency couldn't afford the service they wouldn't be able to afford the documents.

070

SEN. JERGESON asked **Mr. Weedon** if the unused space in the Great Falls Vo-Tech was one huge room or a number of small rooms. **Mr. Weedon** said it is one huge room with dirt floors. **SEN. JERGESON** asked if **Mr. Weedon** had talked to anyone about the cost to finish that space. **SEN. JERGESON** stated that he would like to have A & E talk to the subcommittee. **CHAIRMAN PECK** asked **Ms. Joehler** to inform A & E that the subcommittee would like to see them.

091

Gerry Sutton, Fiscal Management, reviewed pages 18 through 60 of **EXHIBIT 1**.

468

SEN. JERGESON asked what happened to the study was done on moving the Extension Service to some other area of the University. **Dr. Malone** said that the plan to move will take place by July 1, 1991. **SEN. JERGESON** asked how the relationship will be maintained between the Extension Service and the Ag Experiment Station. **Dr. Malone** said that the move to the University will put more of the University resources at the command of the Extension Service. The communication between the Ag Experiment Station and the Extension Service will be maintained through an Associate Vice President for Academic Affairs. They can broaden the ties to Extension without diminishing the ties to Agriculture.

508

SEN. HAMMOND asked how many supervisors the Extension Service has after the consolidation in 1987. **Dr. Malone** said there are four area supervisors. The basic structure of the Extension Service will continue, it will not lose its identity. **SEN. HAMMOND** asked if the 30% turnover in the Extension service came about by not having people available. **Mr. Mathre** said that other people are hiring the employees away from the extension service, there was a 30% turnover in the past two years. The salary schedule for county agents ranks 46 out of 50 states. **Dr. Malone** stated that the Director's position for the Extension Service has been open for two years now. **SEN. HAMMOND** asked what has happened to the

plot system out in the area of the Experiment Station. **Don Mathre** said they still have a complete force at the Ag Experiment Centers. These people work with the County Agents putting on the farm test.

601

Mr. Amberson emphasized the importance of the subcommittee's consideration that the Experiment Station Staff and the Extension Staff be dealt with as it relates to salaries on par with the University counterparts on campus. The formal presentation for the Ag Experiment Station and the Extension Service were complete and they would answer any questions.

641

CHAIRMAN PECK stated that the transfer of credits from the ag programs at the community colleges was being recognized much better in out-of-state colleges out of state than they have been in the past by **MSU**. **Mr. Amberson** stated that in the 25 years he has been on staff he cannot remember a time when he had any difficulty accepting transfer credits from any of the community colleges.

CHAIRMAN PECK asked who does the evaluations when a student transfers to **MSU** from another school. **Mr. Amberson** said there are a half-a-dozen faculty members that advise students, depending on the students area of study. **CHAIRMAN PECK** asked if it were possible for a student to transfer from one school to **MSU** and have to take an identical class over again. **Mr. Amberson** said it is possible, but highly improbable. **CHAIRMAN PECK** asked if there is an appeals process within the college. **Mr. Amberson** said that as the Department Head most appeals come to him. If they are dissatisfied they will then go on to the Deans Office. **CHAIRMAN PECK** asked if students know that they have the right to appeal. **Mr. Amberson** stated that the faculty's first and foremost obligation is to the students. As a result it would be the faculty member with the student who would make the appeal. **Dr. Malone** stated that **MSU** completed an arrangement with Northwest Community College in Wyoming in which a student admitted there, can be duly admitted at **MSU**. **CHAIRMAN PECK** stated that the community colleges were not very happy about the arrangement worked out with Powell because it was not made available to the community colleges in Montana. **Dr. Malone** stated that Powell came to **MSU** with the arrangement, and a similar agreement will be attempted with **MSU** and the community colleges.

777

SEN. HAMMOND asked if the Agriculture program has improved over the years. **Mr. Amberson** stated that currently the students pursuing degrees in Agricultural Education are extremely well prepared. They have a broad background from basic science, social studies and typically do not reach their more technical level courses until their junior and senior year. They have a little difficulty in the mechanics area if any, because of the lack of facilities at **MSU** to train them.

840

SEN. BIANCHI asked if the Extension Service employees are considered faculty. **Mr. Phillips** said that Extension County Agents carry faculty rank at **MSU**. The average county agent is paid \$26,000 per year. The national average is \$32,000 per year, ranking Montana at 48th among the 50 states. **SEN. BIANCHI** stated that when the state pay plan is completed, it doesn't include the Extension Service. **Mr. Phillips** said the faculty of the Extension service is treated the same but are not included in the University System line.

887

Jim Christianson, state staff member Wheat and Barley Committee, said he is substituting for Larry Barber and distributed and reviewed written testimony. **EXHIBIT 2** The Wheat and Barley Committee is dedicated to sending a quality product to the foreign buyer. They spend more on research than on market development, because research results in market development. If a product can be created that will be in demand, a large part of the job has been done. He doesn't see that changing, but what he does see changing is the emphasis on market research. We raise three times the wheat in the world than we did 30 years ago, the production has been done, now something needs to be done to bring the cost of production down in order to be competitive in the international market place.

Mr. Christianson stated that he feels the funding level for the Wheat and Barley Committee will stay the same, unless the farmers insist that the assessment level be dropped. But what is more worrisome is many people in the Legislature think the state doesn't need to fund these programs because the Wheat and Barley Committee will. The Wheat and Barley Committee looks more to funding emergency situations, but more than half of the research dollars now substitute where the Legislature cut General Fund dollars.

144

Milt Munson stated that the capital expenditures to date are on a 50-year replacement system. We are asking the experiment station to be a model for the farmers and conduct high-tech research, but then they put them on a 50 year replacement basis for capital expenditures. They will lose people as much as equipment just from low capital expenditures.

Mr. Munson stated that he went to Washington D C and lobbied for federal funds. Last year they received an increase of approximately \$65,000 for the Experiment Station and \$65,000 for the Extension Service. The LFA is now saying that they are going to reduce state funding by that much. It isn't fair that he spent all of his time lobbying for those funds and now LFA is taking them away. On the national level they said if the states removed the money from state funding, the money would not be available on the federal level the next year.

241

Chuck Merga, Wheat and Barley Farmer, stated that the Montana Grain Growers Association (GGA) supports the Extension and Ag Experiment Station Budgets. The GGA would like the subcommittee to fund the positions out of General Fund, however, it is aware of the general budget constraints that exist today. The Montana GGA is trying to help by looking for available funds that exist that the GGA may be able to redirect to better serve the purpose of this state. **Mr. Merga** said that this is what the bill for the two Bio positions is about to the GGA.

288

Hayden Ferguson distributed and reviewed written testimony.
EXHIBIT 3

338

Keith Olsen, Executive Director, Montana Logging Association (MLA), expressed support of the budget modification request to provide reliable funding for Montana's extension forester. Currently the extension forester is funded by \$54,000 in federal monies, through the Renewal Resources Extension Act. However, because this money is soft federal dollars, the extension forester can enter the unemployment market with less than 30 days notice. Thee **MLA** is a leading participant in an aggressive cooperative effort to implement a voluntary educational best management practices program. **Mr. Olsen** suggested that the responsibility for identifying, informing, educating and servicing the 11,000 timberland owners is a challenge. No organization or agency could do better than Extension Forestry. The **MLA** feels that this has been ignored long enough and asks the subcommittee to recognize the obligation to recommit to a strong and effective forestry program to Montana.

390

Frank Daniels, President, Northern Plains Sunflower Growers Association, expressed support and urged the subcommittee to fund the Extension Service and the Experiment Station Budgets.

412

Nick Schroger, MEAC, said that at the last meeting **MEAC** was asked to identify the two priorities that the extension people should look at over the next five years. **MEAC** feels it is important to strengthen family and youth development systems. The ultimate purpose in education would be to strengthen the family systems; this is done through the field faculty of **MSU**. The second priority would be to get as efficient as possible in delivering information to the state's people. **MEAC** strongly supports the information process and delivery of electronic technology modification. It is the only way existing faculty can keep up.

566

Duane Larson, Representing Montana State Fire Chiefs Association (MSFCA), stated that the Board of Directors of **MSFCA** supports the budget requests of the Fire Services Training School. The program is well balanced, well managed, broad in scope, and

provides a valuable service for Montana's firefighters and the citizens of Montana. **MEAC** supports the endeavors of the Training School and has seen much upward mobility in the quality of the programs in the last few years and hopes it will continue. He urged the subcommittee to support the budget request modifications.

631

Lorraine Cattermole distributed and reviewed written testimony.
EXHIBIT 4

678

Clark Johnson, Volunteer Fireman, said he is the Fire Chief of Wolf Point Fire Department and has traveled over 520 miles to ask the subcommittee not to cut the Fire Services Training Program. The value of this program is immeasurable, education is needed for the volunteer firefighters. It costs \$34 per firefighter to educate those who want to take advantage of the program. That is less than forty cents per year per taxpayer.

Mr. Johnson stated that the way you train is the way you will react at a fire. If you simulate conditions as closely as you can to what is real than when the real situation occurs you will be prepared when it happens. **Mr. Johnson** stated that he is a new fire chief and was uneducated, after training for some time the fire whistle finally blew. Upon arrival at the structure he was informed that there were three small children somewhere in the house. The firefighters at the scene acted as they had been trained, the three children were removed from the house and no one was injured. The lives of those three children cost the state \$102 in education. Currently there have been no injuries in 75 years of fire fighting in Wolf Point, **Mr. Johnson** contributes this to the safety training that comes from the Fire Services Training School.

833

Dean Gluver stated that in 1990 they lost the High School in his community. The loss of the High School is approximately \$5,000,000 but through the training that we have had over the last ten years through the states Fire School it enabled us to save \$6,000,000 in school property. The fire lasted 28 1/2 hours and pumped approximately 1 1/2 million gallons of water. The chill factors were down to less than 70 degrees below zero.

Mr. Gluver said that this program is very important and can't afford to let it go. There are direct monetary benefits out there as well as life saving. **Mr. Gluver** stated that he put in 35-40 hours per week as a Volunteer Fire Fighter. The fees that are charged by the fire school may seem minimal but because of I-105 there are Volunteer Fire Departments that can't buy gas to get the trucks to the fire.

912

SEN. VAUGHN said that the letters she has received regarding the Fire Services Training School at the University of Montana state that a move of this type would greatly decrease the effectiveness of the training school. In the last several years the training school has made giant steps forward and the money spent on the school has probably one of the best dollars spent in Montana.

SEN. VAUGHN stated that because of the Volunteer Fire Department in Lincoln County their insurance rates have dropped. **SEN. VAUGHN** urges the subcommittee to leave the Fire Services Training School at the University of Montana.

ADJOURNMENT

Adjournment: 11:00 a.m.



REPRESENTATIVE RAY PECK, Chair



MELISSA J BOYLES, Secretary

RP/mjb

HOUSE OF REPRESENTATIVES

EDUCATION SUBCOMMITTEE

ROLL CALL

DATE

1-30-91

NAME

PRESENT

ABSENT

EXCUSED

REP. RAY PECK, CHAIRMAN	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SEN. GREG JERGESON	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
REP. LARRY GRINDE	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SEN. DON BIANCHI	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
REP. MIKE KADAS	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SEN. H.W. "SWEDE" HAMMOND	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

HR:1991

CS10LRLCALED SUB

Exhibit 1 consists of a 61 page study. The entire exhibit is available at the Montana Historical Society, 225 North Roberts, Helena, MT 59601. (Phone 406-444-4775)

EXHIBIT 2
DATE 1-30-91
HB _____

TESTIMONY OF THE
MONTANA WHEAT AND BARLEY COMMITTEE

Great Falls, Montana

PRESENTED BY
LARRY BARBER, DIRECTOR

For the record of
the

Joint Sub Committee on Education

on

The 1993 Biennium Ag Experiment Station Budget

January 30, 1991
Helena, Montana

My name is Larry Barber. I am a grain producer in the Judith Basin, just north of Denton and am on my second term as a director of the Montana Wheat and Barley Committee. As I am sure you all understand, the Montana Wheat and Barley Committee is the prototype for self-help programs in Montana agriculture. The wheat and barley farmers in this state, for more than two decades, have set aside a part of their cash receipts from wheat and barley sales to fund market development and research activities.

This industry has changed amazingly in a quarter of a century. Back when I started farming, the flour mills in the United States took the majority of the good quality wheat produced across the U.S. and the smaller remainder was left for the cash-short credit customers overseas. Japan, Korea, Taiwan, three of the four largest customers we had at that time for Montana wheat, were "cheapest wheat", PL480 buyers. They were nearly give-away type markets. Times have really changed. Now these three, large customers are the best cash customers in the world. But, in return, we can no longer sell them junk. Just as their steel mills, textile plants, and automotive industries have all been built since World War II, and have, therefore, outclassed what we have in the U.S., their flour mills and bakeries have done the same thing. In today's world market, Montana's product shipped overseas must be equal to, or even better, than that which we sell domestically.

Historically, the domestic market has been able to "skim off the cream" of any given crop. U.S. flour mills will isolate areas as small as an individual, country elevator to get exactly what they want and avoid those areas which do not meet their standards. But, the foreign buyer doesn't have this luxury. Grain is being gathered for shipments in vessels that each contain in excess of one million bushels. Vast geographic areas in Montana are involved in these individual sales.

Montana State University -- its College of Agriculture and Research Center system -- has been fundamental in meeting today's foreign market demand for quantity and quality. It could not be otherwise. In the 1980's, as much as 70 percent of Montana's wheat, in any given year, was exported to the Pacific Rim. Any shortcomings we may have in "keeping up the pace" in producing quality, quantity and price-competitive grains, is going to be quickly filled by the Canadians, the Australians, or even from our competitive neighbors in North Dakota, Colorado and Nebraska.

I am here today to speak specifically in support of the Agricultural Experiment Station budget. This is an all-important part in the overall development of a viable agriculture industry in our state. It is the first opportunity for theoretical research coming off the campus at MSU to prove itself. It is, literally, where scholarly theory meets reality.

The seven research centers located around this state, and the off-station trials that are strategically located on individual,

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cooperative producers' farms, give our industry an up-close view of those tools that will allow us, as farmers, to survive.

Let me give you some specific examples of the kind of information I can garner from a research center that will help me in my operation.

Variety trials are probably the most obvious. I no longer have to worry only about the yield of specific wheats and barleys, their protein content or their resistance to a disease or an insect. Now I have to be also sure that it's a variety that is sellable in a sophisticated international market. It must meet at least 18 criteria for milling and baking quality if it's a wheat, and must have the correct amount of beta glucans and/or oil, if it's barley destined for certain markets; things I never even thought of a few years ago. In addition, I must be concerned with their resistance to the vast, modern array of herbicides. A mistake with these chemicals can cost me a crop, not to mention what their misuse may do to the environment and what their cost can do to my already narrow margin of profit. I want to be able to see that research on the ground, for myself, before I take a chance with it in my operation. That's what research centers are for.

Alternatives to costly herbicides, pesticides, and insecticides are becoming increasingly imperative. Not only from the point of view of the environmentally conscientious public but, more fundamentally, in terms of their cost. None of these inputs are cheap. I depend on research centers to give me alternatives to chemicals, whether it be bedstraw weed control, biological agents, various crop rotations, or even the varieties of wheat and barley themselves.

Modern technology has done wonders for this industry, even to the extent of adding a new term to public jargon: "the Green Revolution". Modern fertilizers played a key role in that revolution. But, fertilizers aren't cheap, either. It's only by practical research at these research centers that farmers like myself can learn optimal fertilization rates, the most viable placement locations in the soil, and alternatives to commercial fertilizers such as crop rotations, and, in the case of the irrigation farmer, a balance between water application and fertilizer use.

Let me give you one, specific example of how this kind of research, in its various forms, comes together to give me a better "bottom line." Hard red spring wheat yields have improved 1.7 bushels per inch of water in the years that I've been farming. It doesn't rain anymore than it ever did, but I can produce more of a quality crop because of better management, sound cultural practices, improved varieties, adequate fertilization, and effective weed, disease, and

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insect controls. Most of this modern technology has been provided to me by the Montana Agricultural Experiment Station and their U.S.D.A. Agricultural Research cooperators.

In conclusion, let me spend a few moments on the 1993 Biennium Program Modification Requests that you've been given on behalf of the Research Station. For years now, every legislative group has been extremely reluctant to add anything new to the College of Agriculture or Experiment Station budgets. Funding of existing programs has, in fact, been less than adequate to maintain even the programs we have now. For example, the College of Ag and research centers are on a 50-year equipment replacement schedule. That's a joke in anyone's real world. I run equipment longer than anyone I know, but even I have to replace a tractor or combine more often than once in a lifetime! How scientists in a high-tech laboratory can survive under this policy is beyond me. But, if this is the way the Legislature is going to treat equipment replacement, one can well imagine how the Legislature has treated adding any new programs. New problems come along occasionally, whether we can afford them, or not. You have a request for funding in soil biology. This would be mainly related to water quality issues. Simply ignoring the subject isn't going to make it go away, and, in fact, if we're going to have our destiny at all under our own control, we're going to have to get into this issue in a very real way, very quickly.

You also have a request for additional work in developing biological weed control agents and biorational grasshopper management. Alternatives to chemicals have the potential of producing specialized, niche-market products that can be sold under the label, "chemical-free", but more importantly, anything that we can do to reduce chemical utilization is positive, both in terms of the environment and the cost of the chemicals themselves.

And the cost for these programs to the state is relatively small. But the return potential from this science is potentially very great. Agriculture is the number one contributor to Montana's economy, half again as large as the second place industry, tourism. Agriculture is, therefore, the number one contributor, directly or indirectly, to the state's general fund. I, therefore, believe that we, as farmers and ranchers, deserve an equitable return on the tax dollar to support our industry. There is little to be gained from standing still and marking time, as we've been doing in agricultural research funding for many years. I ask your support for the overall Experiment Station budget and program modifications as a commitment to moving ahead.

Thank you, very much.

STATION/EXTENSION BUDGET HEARING

HAYDEN FERGUSON---retired, MAES

There is simply no question that the funding and especially the cutting of funding over the last several years for the Station/Extension research/educational activities has been a terrible mistake in terms of the current well being and future of Montana.

Montana is land of a harsh and violent climate and agriculture is the basis of its economic existence. Those factors make the constant input of technology and education absolutely even more essential here than in other areas in order to have a viable and competitive agriculture. In spite of that, the political powers of Montana have made the Montana Agricultural Experiment Station/Extension Service the worst funded in the nation of any state where agriculture is important. We have the lowest pay, the lowest work funds, and the lowest funding for equipment. That makes the Station/Extension responsibility of providing the absolutely essential technology and education to the Montana people basically impossible to fulfill. Montana is currently paying a tremendous price for the lack of vision that allowed this situation to occur and that price is going up at a rapid rate. And, what makes this lack of vision even more difficult to understand is the fact that past research and education efforts of the Station/Extension have created in Montana more dollars than any other expenditure of state monies.

In the last 10 years the political powers have cut about 43 people from the Station and 15 from Extension. Let me comment on just two of the positions lost:

Extension Horticulturist-Orville McCarver--if there is a father of the Montana Seed Potato industry, he is it.

Seed Physiologist-Loren Wiesner--tremendous contributions to Montana agriculture through his work on forages and grain crops. Now, the political powers have eliminated both of those positions and I will tell you without fear of being wrong that the people of Montana are very much worse off because of that.

One could go through this same scenario with many, many of the other positions lost. Not only should these positions not have been eliminated, other positions dealing with speciality crops and crop management and other important agricultural areas should have been added. The states and provinces around us have done just that---it is no accident that they have fields of dry beans, lentils, sunflowers, canola, rape, cranby and others and we in Montana have almost nothing similar---and the cost of not having these and other technologies available to Montana agriculturalists far, far exceeds the cost that would have been required to have them; an average estimate of the return on dollars spent on agricultural research is about 30:1. The political forces in other areas have recognized that, similar forces in Montana have not.

The funds for support of agricultural education and research in Montana are ludicrous---can you imagine any organization functioning over time with a funding level that provides for no repair of equipment and replacement every 50 years. If it were not potentially tragic it would be funny; the people of P&S are driving around Montana to do their essential

work in vehicles that farmers would have junked or made into grease wagons.

And now we have before us proposed budgets that not only perpetuate but, in fact, accelerate the criminal (that word is a quote from two different young farmers in Montana when discussing Station support) crippling of the Station/Extension. At the very best, assuming that all pay adjustments--including very significant increases in administrators pay in order to be able to fill the 4 vacant administrative positions--come from other funds, these budgets represent a cut of from 7 to 10 percent simply because of inflation. That means adding years before we get such things as sawfly resistant winter wheat and more drought tolerant spring wheat and biological control of weeds and better utilization of fertilizers and better feeding efficiency of cows and better economic tools and it means falling farther and farther behind our neighbors in North Dakota and Canada and it means a dimmer and dimmer future for all of Montana because all of Montana is so intimately tied to a viable agriculture.

At the worst, assuming all pay adjustments must come from these budgets, they would simply mean the absolute destruction of the Station/Extension as viable units in Montana. It could only be met by eliminating large and complete segments--closing of Plant and Soil Science and all of the Research Centers. It is inconceivable that any person who has any concept of Montana and of Montana agriculture could suggest, even as a starting point, such a budget.

The budget before you shows a 7% increase in Federal funding for the Station; that is there because the best minds in this nation, in fact world wide, are saying we must have more and absolutely cannot have less agricultural and agriculturally related environmental research. Thus, funds to cover some of inflation were included. The Montana LFA clearly does not agree with these best minds and has used this Federal increase to decrease Montana funding and ,thus, decrease the technology made available to Montana people. At best, this action goes against the spirit and intent of the Federal action. This is not new in Montana; in other states the Regional Research funds are used for their intended purpose, to help fund research. In Montana the political powers have used these funds to offset Montana expenditures and, thus, have decreased the Montana research contribution. This forces the Administration to use these funds for salaries, another action clearly against both the spirit and intent of the program.

REFLECTIONS ON THE FUTURE OF MONTANA AGRICULTURE

Hayden Ferguson (soon to retire Prof. of Soils, MSU)

Agriculture is Montana's largest and most important industry and the future of all of Montana is intimately dependent on viable agriculture. On both a world-wide and national basis, the best minds constantly remind us that increased agricultural technology is absolutely essential for our economic, health, and environmental well being. On a national basis, many studies show that the return/cost ratio of agricultural research is 30 to 50%. In Montana it may well be higher than that; there seems little question that state funds spent on agricultural education and research have returned more dollars to Montana than any other expenditure of state funds (of course one cannot expect a "return" on the funds spent in many essential social programs). In spite of this, there has been, in Montana, a rather relentless cutting by the Legislature of agricultural education and research and, this has occurred in a system that was already badly under funded. In my opinion, this has raised a serious question relative to the future of a viable and competitive agriculture in Montana.

All four of the top administrators of the College of Agriculture have resigned in the last two years. None have yet been replaced although we are currently trying to hire a Dean.. All were young, competent, and did not really want to leave. They have left because, for an administrator, the situation is approaching untenable, i.e.: 1) They well know of the many problems Montana agriculture faces that must be solved by research/education but with the constant decreasing of an already low budge, they have to spend their time cutting programs rather than helping solve problems. 2) The political system has taken almost all management authority from them. Funds come to them designated as personnel services, capital equipment, or operations. Regardless of the rational of a management decision that would dictate switching funds between these categories, to do so is illegal and will incur castigation and ridicule (overtly or by implication) by the Legislature and the Fiscal Analyst. Moreover, efforts to increase efficiency by reducing less important areas to support more important areas has led to the total loss of funds. This takes away management possibilities and is counter productive in terms of fulfilling state needs. 3) They administer for the lowest paid and probably worst supported faculty in the nation. The faculty is frustrated and angry because they know what has happened in other states with similar economic situations and they focus these feelings on the administration. 4) Often, while fulfilling their responsibility of attempting to help Montana agriculture by arguing for adequate funds at the Legislature, they are ridiculed and accused of bad management. 5) They face these things for from \$15 to \$40,000 less pay than their friends in other states. No person talented enough to be Dean has to put up with these things so they leave--for much higher pay. This is not restricted to the College of Agriculture, it is campus wide.

The total annual capitol budget of the Experiment Station of \$125,000 translates into a replacement schedule of 50 years, without the consideration of any different equipment to meet new technology. The station cannot survive as a viable research organization under this situation.

Winter wheat is a yearly \$300,000,000 industry in Montana. The winter wheat breeder has \$6288 per year of state work funds to keep that industry competitive by solving the problems of quality, Russian wheat aphid, saw flies, diseases, and winter kill.

Montana is probably the only state, and certainly the only state where agriculture is of any importance, without a state supported soil fertility Extension specialist.

Except for a small amount of support for safflower, Montana supplies no funds for work on alternate and new crops--a stark contrast when compared to other states and Canadian provinces.

Barley is a yearly \$180,000,000 industry in Montana. The barley breeder has \$6,000 per year of state work funds(labor, equipment, supplies) to keep that industry competitive.

The annual state funding for the Experiment Station in North Dakota is \$ 12.3 million--the annual state funding for the Montana Experiment Station is \$ 6.3 million.

Montana state funding for Extension is about \$2.6 million per year, the lowest in the nation except for Delaware, New Hampshire, and Rhode Island. North Dakota state funding for Extension is about \$4.6 million.

Montana has about 1.0 FTE working on utilization of agricultural products, North Dakota has about 12 people working in that arena.

Montana ranks last, along with Wyoming, Maine, and West Virginia, in real growth of food manufacturing in the last 20 years. North Dakota is in the top group(five groups).

With the exception of what we bootleg or are supporting with grants, we have no new work on sustainable agriculture.

Commodity organizations provide funds to augment research in their areas of interest in every state. The difference in Montana is that without the commodity support we essentially would not have research support at all, it is not a matter of augmentation. Considering what agricultural education and research means to ALL of the people of Montana, this approach to the future of agriculture in Montana is unique and strange.

State funding per student at Montana State University is about 67% of the AVERAGE of that at our peer institutions--North Dakota State, U of Idaho, U of Nevada at Reno, etc.

Funding for laboratory teaching equipment and supplies in Plant and Soils is essentially non-existent. We are attempting to teach new technology in undergraduate labs with the same triple beam balances that I used at Harrison High in 1940.

For the last several years, MSU has made significant cuts in the instructional and support areas. The 1988 cuts amounted to about \$1.3 million and significant cuts have been made every year since.

The percent change in state funding of some Agricultural Experiment Stations between 1983-84 and 1988-89: Montana--8.3%, Arizona--61.2%, Oklahoma--28.9%, Oregon--29.0%, Colorado--12.3%, Washington--23.2%. North Dakota changed only 0.6% but they had \$12.2 million in 1983 compared to Montana's \$5.8 million; moreover, North Dakota's Legislators pumped about \$8 million of federal funds into their Experiment Station, makings N.D.'s overall percent increase since 1983 =26.7% compared to Montana's overall percent increase of 5.7%, by far the lowest of any I could find.

Since 1987 cuts in the Extension service-Experiment station have amounted to more than \$1.6 million. We started poorer funded that almost any state where agriculture is important and, while our competitors have been increasing their agricultural teaching/research efforts, we have been cutting ours.

THERE IS SIMPLY NO WAY THAT MSU/THE AGRICULTURAL EXPERIMENT STATION/EXTENSION SERVICE CAN SERVE THE PEOPLE OF MONTANA AS THE FUTURE DEMANDS UNLESS THERE IS A SIGNIFICANT TURN AROUND IN THE POLITICAL ATTITUDE RELATIVE TO UNIVERSITY EDUCATION AND RESEARCH. AND, WITHOUT THAT EDUCATION AND RESEARCH THE FUTURE IS DIM INDEED FOR MONTANA.

SOME EXPERIMENT STATION CONTRIBUTIONS

Hayden Ferguson(soon to retire Professor of Soils)

There is simply no question that, if we were still using the technology of the 50's and 60's in Montana agriculture, the situation would be desperate. And, most of the technology that agriculturalists (farmers, ranchers, and the businesses that serve them) are using now came directly from the Montana Agricultural Experiment Station/Extension Service. Exceptions to this are with machinery and pesticides, but much of the information on the best use of these items did come from the Station/Extension Service. It is clear that no expenditure of state funds(at least that I can think of) has created more new dollars and returned more per dollar spent, for and to ALL of the people of Montana, than the activities of the Station/Extension Service. It is also clear that the agricultural future of Montana and, thus, of Montana is dependent on the continual input of technology. To gain some idea of what will be essential for our future, consider some of the past accomplishments and realize that unless similar technological inputs are available in the future that future is dim indeed.

- 1) The application of production indexing of beef cattle, developed cooperatively by the USDA and Mont. Exp. Station, totally changed that industry on a world wide basis. Since Montana is a beef state and got in on the ground floor to that approach, it is still reaping great rewards from that concept.
- 2) Yogo winter wheat was probably the first commercial really winterhardy wheat. And, of major importance is the fact that the germ plasm of Yogo is still a major factor in the development of the better wheats that have been developed and are in the developmental stage.
- 3) Compana barley was the first really drought resistant barley.
- 4) The MAES/CES was a major factor in the rebirth of the malting barley industry in Montana.
- 5) The safflower industry is largely a result of the MAES/CES.
- 6) The water use efficiency of spring wheat has increased by about 1.7 bushels per inch of water used over about the last 25 years.
- 7) Incorporation of bacterial wilt resistance into Ladak 65 alfalfa.
- 8) Yield of barley in Montana has gone up, over about the last 25 years, about 0.7 bushel/acre/year.
- 9) Saw fly resistant spring wheat.
- 10) Technology of using weedicides.
- 11) Soil nitrate test.
- 12) Understanding potassium fertilization.
- 13) Soil fertility-soil water interactions affects on crop production.
- 14) Saline seep control in many areas has allowed farming on areas that only a few years ago were crusted white with salt.
- 15) Contribution to the Montana seed potato industry.
- 16) Elimination of barley stripe mosaic virus.
- 17) Some cultivars: Lewis, Clark, Bowman, Gallatin, Fortuna, Lew, Newana, Pondera, Glenman, Redwin, Norwin, Windridge.
- 18) Hundreds of hours of educational effort by members of the MAES/CES so that Montanan's can know of, understand, and use the technology available.

The increased annual amount of dollars available in Montana because of the technological input described in this very short and incomplete list is in the many millions. For instance, elimination of barley stripe is not an exceptionally "big ticket" item but it has created about \$6,000,000 a year, every year, that would not have been here otherwise. And, every person in Montana benefited significantly from this affect on our economy. It is absolutely essential that there is a continuing input of the kind of technology described above in the future. This fact makes it extremely difficult to understand the relentless cutting of the MAES/CES over the last several years by political forces in the state. Also, while we have been cutting the funding relative to this kind of technology our competitors in Canada and surrounding states have been increasing funding for these activities, because they understand completely that it is essential for their future. The result of our approach will be non- or less- availability of the kind of technological inputs listed above in the future. That portends a less than bright future for Montana agriculture and, thus, for Montana.

Montana agriculturists are currently taking an economic beating from many things that could ,hopefully, be ameliorated by research, a few are:

- 1) It is estimated that, even in the states that are doing a good job of supporting agricultural research and extension, 70% of the research effort must be devoted to only keeping yield efficiency where it is now. Clearly, that is essential in order for farmers/ranchers to survive.
- 2) Saw flies,aphids, and winterhardiness of winter wheat.
- 3) Soil crusting problems with sugarbeets and small grains.
- 4) New crops and sustainable agriculture and farming systems.
- 5) Environmental problems--when a place like California says that no product with a particular bug or chemical can be sold there we had better be ready. If we are not, the economic impact will be tremendous and all bad. The same goes for use of something that someone says absolutely cannot be tolerated in ground water.
- 6) Keeping up with soil fertility problems.
- 7) The constant battle for higher or different quality farm products.
- 8) The constant battle with weeds.

Good morning. My name is Lorraine Cattermole. I am here to speak in support of the Extension Service of Montana State University.

As County President of the Lewis and Clark Extension Homemakers Council I am speaking for 156 members in this county. At the request of our State President-Elect I am also representing four thousand five hundred (4,500) members in Montana. These Montana members are part of 550,000 Extension Homemakers nationwide.

Our Montana Extension Homemakers Council is a separate organization from the Extension Service but we work closely together in an educational partnership. This partnership is a great benefit, not only to the homemakers but to Montana. I have learned that Extension Homemakers is the largest volunteer educational organization in the United States. It is only through the various programs of continuing education offered through the Extension Service that many of us have access to the lessons that we need and desire to make our lives easier and to enable us to cope in these days of great stress.

In the past, Extension Homemakers have had eight Programs of Work. In the next few years we will be focussing on three major issues. The first year will be on Child Care, covering various aspects of that subject. The second year will be on Waste Management. Our subject the third year will be Literacy. We sincerely believe that by working with the Extension Service we will be able to make an impact on these very vital issues. These three subjects are pertinent to all Montanans as well as to the nation and to the world.

I speak to you from my heart. If I did not firmly believe in the work and purpose of the Extension Service, I would not be here today. I ask for your support of the Extension Service.

Lorraine A. Cattermole

Lorraine A. Cattermole
P. O. Box 1195
Helena, Mt. 59624

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