UNIVERSITY OF MINNESOTA
North Central Research & Outreach Center

NORTH CENTRAL NEWS

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NCROC Welcomes the University of Minnesota Regional Extension Center

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Beginning in January 2004, thanks to the support of Itasca County, Itasca Community College, the North Central Research and Outreach Center, and various governmental, community groups and individuals, a Regional Extension Center will be located at NCROC. The new Regional Center is one of eighteen similar centers located in various communities around the state. Two of the Regional Centers will be located at Research and Outreach Centers. NCROC and WCROC at Morris will host Regional Centers.

This new system of delivering regional and statewide extension educational programs and services through eighteen Regional Centers represents one of the most significant changes that have occurred in the University of Minnesota Extension Service in its nearly 100 years of history. The new system replaces, in part, the individual county offices that have been located in all 87 Minnesota counties for as long as any of us can remember. This change will have a significant impact upon the day-to-day services county residents are used to receiving from their county extension service.

Under the new system, individual County Boards will need to decide if they want to support extension educators in various specializations or areas of expertise. County extension educators will need to be funded entirely from county resources. The old federal, state/university, and county partnerships will no longer fund county positions.

University of Minnesota
Extension Service
Regional Extension Center
Community Locations

To help understand why the current changes were necessary it may be helpful to know a little about how the Extension Service was formed and how positions are funded. The Cooperative Extension Service was established in 1914 by an act of congress called the Smith-Lever Act. It was developed as a partnership between the USDA and land grant universities. Its purpose was to provide educational programs to deliver practical information on subjects relating to agriculture, home economics, and rural energy, as well as other subjects useful to persons not attending a college. State legislation enabled local government groups such as counties to become a third partner in this education process. Federal funding through the USDA Cooperative Extension Service, the various states through this land grant universities and individual counties provide the resources needed to develop and deliver a variety of educational programs.

Over the years, federal and state funding for Extension has continued to decline. This continuing decline in federal and state funding created a financial crisis for the Minnesota Extension Service. The Extension Service had to get smaller and become more efficient in the delivery of educational programs and services in order to survive. The change to Regional Extension Centers is the Minnesota Extension Service's plan to improve efficiency and deliver maximum services to Minnesota residents within the constraints of this new funding reality. It is obviously not the most optimum service for many of us. We are used to being able to go to a local extension office for information on a variety of subjects. Information will still be available in most counties, but the individual services we have come to expect may not be available.

In the current plan, four Regional Center Educators, one Area Program Leader, one Regional Director, and two support staff will be located at NCROC. The regional staff will occupy the NCROC offices currently occupied by Itasca County Extension staff. A reduced county staff will relocate to an office in the county courthouse.

The Regional Center Educators will specialize in Water Quality, Family Resource Management, Health and Nutrition, and 4-H Youth Development, and the Area Program Leader will assist other educators in developing and delivering programs in Agriculture, Food and Environment. An article on who these new educators are and what programs they offer will be included in the spring issue of the *North Central News*.

While the development of the Regional Center at NCROC provides some exciting new opportunities for the delivery of extension programs and services, it also means the end of a very good and productive co-location partnership with Itasca County Extension Educators. Itasca County's decision to locate the County Extension Office at NCROC provided numerous opportunities for sharing in the delivery of educational services to customers throughout northern Minnesota and the opportunities to work together benefited both NCROC and Extension staff. We will miss our friends at the UM Extension Service Itasca County. The new county staff will be smaller in numbers and located at Itasca County Courthouse. We hope that the relationships we have formed will continue even though the distance is more than a walk down the hall.

Welcome to UM Regional Extension Director Mardi Harder and the Regional Center staff. The faculty and staff at NCROC welcome the opportunity to work together to serve the citizens of our region and state.

As we say farewell to the Itasca County Extension staff, we hope the partnerships we have formed to work together to serve our customers can be maintained. We look forward to continuing to work together on programs of mutual interest. The door at NCROC will always be open to our Itasca Extension friends.

AGRICULTURAL ENGINEERING

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As usual, the past several months have been busy times for maintenance and improvement here at NCROC. Perhaps the most noticeable improvement on our main campus is the fresh white paint on the barns. The paint job was preceded by a considerable amount of repair and replacement of damaged boards etc. by our Center carpenter, Tom Carey. Due to strong competition for limited resources, the appearance and condition of these buildings had declined in recent years. This work has not only greatly improved appearances, but more importantly, also helped assure the integrity of these structures to meet Center program needs for years into the future. Another change noticeable to long-time visitors to NCROC is the disappearance of an old 40' x 60' loafing barn in the hillside east of the farm shop. Because of failed foundation/retaining walls and the cost prohibitive nature of repair, this barn was demolished in early 2003 and replaced in the spring and summer by a grassy slope. A third change/improvement on campus, also by our carpenter, has been the construction of a walkway/stairway intended to provide a safer way

for employees and visitors to navigate the slope while walking between the Administration Building and the horticulture area "below the hill". One "unseen" improvement is the replacement of a 500-foot underground electrical service to serve to our large beef loafing barn after the old service failed last winter and was beyond repair.

On the equipment front, there has hardly been a time all year when one could enter our farm shop and not fine a tractor split into two or three parts or other equipment of all kinds in pieces. Here again, resource limitations in recent years have prevented equipment replacement with the timelines we would prefer. (Next year, our newest tractor will be old enough to vote!) Predictably, the results are more frequent breakdowns and the need to replace worn out parts (if still available) and/or otherwise to repair and patch as required to keep the equipment going. Without the efforts and creativity of Center mechanic, Doug Hendrickson, it would be more difficult providing for the ongoing equipment needs of the Center's research programs within available resources.

Our equipment repair activities over the last several months serve to reemphasize our need to replace the farm shop at this Center. Besides energy inefficiency and other problems, the existing structure, designed in a time of animal power, is simply inadequate to accommodate present and future equipment repair and other maintenance related needs. We are hopeful a new shop for this Center will be included in a future legislative bonding bill.

AGRONOMY

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The lack of snow cover during much of last winter, combined with many lengthy periods of sub-zero nighttime temperatures, likely has many forage producers wondering about survival of perennial forage species. Fortunately, there are many factors involved in winter survival in addition to snow cover and soil temperature. The age of the stand of forage plants is one such factor. Young plants are generally healthier than older ones. They tend to be less weakened by disease, cutting management and physical wear and tear from farm implements and grazing animals. Nutrient status is another important factor in winter survival. Nutrient ions in solution in cellular fluid help plants withstand cold soil temperatures, somewhat analogous to the amount of anti-freeze in a car's coolant system. Therefore, well fertilized plants have an advantage. Thirdly, soil moisture status affects respiratory activities of plant roots and crowns. Wet soils will be colder and excess soil water retards effective air exchange between plant cells and the soil water. Dry soil, although warmer, can have a desiccating effect on belowground plant parts, removing water needed for normal biological processes.

There has been extensive study of climatic conditions that can lead to winter injury of alfalfa. Stand age, fertility status and soil moisture conditions aside, alfalfa crowns can survive soil temperatures down to 5-15 F°. Soil temperatures in St. Paul under bare soil were below 10 F° at a depth of about two inches for several hours for three consecutive nights in late January, 2003. These soil temperature data have prompted a statewide effort to assess the potential for winter damage to alfalfa. County extension educators and research faculty at Research and Outreach Centers have been encouraged to dig alfalfa crowns and bring them indoors, plant them in pots, and observe for ability to initiate new growth. This effort may give a preliminary indication of the regionality and extent of alfalfa winter injury. Here at the North Central Research and Outreach center at Grand Rapids, 80% of crowns from a 2000 seeding had initiated vigorous growth after one week indoors. A possible contributing factor to the survival of these alfalfa plants is the phenomenon that soil temperatures under sod are substantially warmer than soil temperatures under bare soil. Soil temperature at a depth of about one-half inch, on the same three January nights as mentioned previously, only fell below 20° by the third night. An alfalfa stand is not precisely sod, however it is not precisely bare soil either. It is possible there was enough "sod effect" to help many of the alfalfa plants survive. It is quite likely that alfalfa plants in mixture with grass will be even less susceptible to winter injury than alfalfa in pure stands. Results of this preliminary survey, when available, will be posted on the North Central Research and Outreach Center website at http://mailman.coafes.umn.edu/mailman/listinfo/alfalfa.

Winter injury to alfalfa is likely to be variable across our region, as local soil moisture, snow cover and soil temperatures can vary. While the preliminary assessment mentioned above may give some early useful indications of winter injury to alfalfa, an accurate assessment of winter survival should be made when alfalfa is growing vigorously and plants are two-four inches tall. Healthy plants will be vigorous with firm roots or crowns, whereas winterkilled plants will have soft crowns with little or no top growth and be easy to pull up. Injured plants will have only a few stems growing out of one side of the plant, and will likely not live through the season.

Counting growing stems per unit of area is a quick, accurate method to determine if an alfalfa stand is dense enough for good forage production. At a density of 55 or greater stems per square foot, forage yield will not be limited. At a density of 40 to 55 stems per square foot, some forage yield reduction can be expected. When stand density is less than 39 stems per square foot, consider replacing or improving the stand (a useful hint: a coat hanger bent to a circular shape is very close to 65% of the area of a square foot; so comparable stand densities using this method would be 36 or greater, 26 to 36, and less than 25, respectively). When assessing stand density, walk the entire field, as some areas will be better than others. Finally, when stands are marginal or thin only in spots, interseeding is a viable option. However, attempting to thicken thin stands of alfalfa by interseeding alfalfa is not an option for stands greater than one year old because of autotoxicity. Winterkilled fields of alfalfa can be re-seeded to alfalfa after waiting at least eight weeks.

There is less readily available information on winter survival of other perennial forage legumes and grasses. Red clover and birdsfoot trefoil are generally less persistent than alfalfa, so significant winter injury to stands of these two species is likely. Fortunately, healthy stands of perennial forage grasses will receive the full beneficial impact of the "sod effect" on soil temperature. Possible areas for concern are grass pastures, which often in fall are suffering from a season of over-grazing and low soil fertility.

ANIMAL SCIENCE

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Once again, it is time for a report on the Animal Science Program at the North Central Research and Outreach Center. I recalled my report from this time last year and was reminded of the adage: "what a difference a year makes"! This year calving was as smooth as ever and that showed in the survivability of the calves during the summer and then the excellent weaning weights. In fact we believe we may have our best calf crop ever, with a couple of calves indexing greater than 140. I believe our beef crew (Dan Brown, Ray Steffen, Terry Hansen, Jim Schmitt, and Kristi Balder) are as proud of the calf crop this year as they have ever been.

We were fortunate to have two excellent interns join us this summer from Brazil, Ivan and Mauro were a true pleasure to work with and we certainly will miss their pleasant faces and challenging questions now that they have returned to Brazil. On my return to Brazil next March, I will make an effort to recruit one or two more potential interns. This also is a sad summer for all of us in the Animal

Science area, because one of our favorite people, farm equipment operator, John Sucher retired. We are going to miss John.

A major event that occurred during the summer was the acquisition of funds to initiate our NCROC Reproduction Biotech. Center. We now have the equipment and infrastructure to provide services and training in areas such as artificial insemination, embryo collection, in-vitro fertilization, and reproductive ultrasound technology. In addition, we offer assisted reproduction technology services such as embryo transfer, embryo splitting, Embryo sexing, and in vitro fertilization. Plus, we will provide embryo recipients for producers. For more information please feel free to contact our office and we will gladly send you a price list or any other information related to the Center.

It appears that our research program continues to develop on an annual basis. We have completed or are in the process of completing six reproduction-based experiments. For a detailed summary of those projects, please obtain a 2004 Cow/Calf Day report. All of these studies will be addressed. Two of these projects have lead to some exciting cattle management prospects for the future. Our replacement heifers were involved in a large 12 state estrous synchronization trial, which we coordinated. Of the 67 heifers that we inseminated, 50 heifers became pregnant within the first three days of the breeding season. We are selling the remaining 17 heifers, so that all our heifers will be done calving within the first two weeks of the calving season! An incredible achievement by our research staff and students! The second project relates to the induced twinning research that we have developed. Many of you who have attended our Beef/Forage Day witnessed that by producing twins we are essentially producing an extra 350 pounds per cow per year. Quite astounding! Our goal now is to make this a practical producer management tool.

As we have done in the past, we will continue to offer cattle for sale on a "first-come-first-served" basis. This year we have 9 pregnant replacement heifers, 36 pregnant registered Angus cows, and 2 non-registered Angus cows, plus 7 older bulls and 20 younger bulls. For the females prices range from $1,000 to $1,450, whereas the bull prices range from $1,400 to $2,000. Stop by and visit us at your convenience, we would love to share with you our exciting cattle research program.

The Animal Science crew at NCROC wishes you a productive winter and we welcome you to visit our beef research facility any time.

FOREST MANAGEMENT

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Eric Henderson, a graduate student who spent much of the last three summers at NCROC, has accepted a position as lead analyst for the Hiawatha National Forest in Escanaba, Michigan. Congratulations Eric! Competition for the position was strong. Eric is the second NCROC forestry graduate student to take a lead analyst position with the USDA Forest Service within the last year.

Focus continues on modeling support for USDA Forest Service planning for Minnesota's two National Forests. Yu Wei, a PhD candidate in the Department of Forest Resources has spent most of the last five months at the NCROC working with Howard Hoganson on this project. Recent efforts have integrated directly their large-scale forest management scheduling model with their dynamic programming model to address the spatial arrangement of forest conditions over time. The draft Environmental Impact Statement for the Minnesota forest plans released in April raised serious concerns about spatial conditions of the forest under scenarios with higher harvest level. More recent modeling results suggest that substantial improvements in spatial arrangement can be made without substantial reductions in timber harvest levels. Plans are to use the integrated spatial modeling system in the upcoming months as the Forest Service moves from draft plans to final plans for the Chippewa and Superior National Forests. The Forest Service is currently reviewing the many public comments received this summer about the draft plans.

In October Hoganson and Wei presented their modeling system at the Systems Analysis Forestry Conference, an international meeting that has been held approximately once every three years for the last 30 years. This year it was in Stevenson, Washington. The conference sheds light on current forest management issues and new management tools. Recent emphasis in model development has been on better integrating environmental objectives related to forest conditions with more traditional objectives of sustaining timber harvesting over time. There is strong support for models that maintain close ties to optimization techniques. Compared to simulation models such models generally provide more information about tradeoffs between specific management objectives and constraints. Substantial investments are being made worldwide to improve basic forest data needed for large-scale applications. The use of management scheduling models is clearly growing as today's computers can address large complex problems. South American and Scandinavian countries were well represented at the conference, reflecting the importance of forest industry to the economies of those countries.

HORTICULTURE

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The 2003 growing season was truly a good news bad news type of season for the horticulture program at NCROC.

Winter injury that we predicted in the spring North Central News was even worse than we thought it would be. The lack of snow resulted in extremely cold soil temperatures during the 2002-03 winter. For the first time in over 30 years at Grand Rapids, we had no strawberry or blueberry harvest. Usually, we welcome some winter injury so we can identify the most winter hardy strawberry and blueberry breeding lines. However, we not only lost all fruit production but had serious damage to plant tissue as well. Winter damage terminated several cultural studies on our strawberry and blueberry plots and set the breeding programs back one year. The carryover chrysanthemum plots also were over 95% winter killed. Most of these plantings were replanted this spring and fortunately showed good regrowth during the 2003 growing season We lost about 20 trees in our orchard. Upon close analysis of these plants, we found that every one of them died because of root death. The dead trees showed no sign of sunscald or dead shoot tissue that we usually see in northern Minnesota. Again, the lack of snow resulted in the first serious apple root damage I have seen in over 30 years in this area. Many of you lost herbaceous perennials, bulbs, or had serious winter burn problems on evergreens. It truly was a test winter for north central Minnesota.

On the positive side, we made great progress in several projects. The first full season of high tunnel vegetable studies showed great promise for area market gardeners. We were able to plant tomatoes as early as April 29, begin harvest on July 10, and continued to harvest fruit until October 13. These dates represent an extension of the growing season by six weeks on the early

end and by over two weeks in the fall. Not only was the season extended, but yield, fruit size, and percent good fruit were significantly increased with high tunnel production compared to field production. Cucumber harvest began as early as June 7 in the high tunnels. Other crops evaluated in the high tunnels were peppers, snap beans, carrots, broccoli, and day neutral strawberries. The 2003 season saw the first of what we hope will be several woody ornamental evaluation plots with that program. Plots of shrub roses, rugosa roses, azaleas and Cottinus (smoke bush) were planted for evaluation of hardiness and landscape adaptability. Good progress was made in our potato verticillium wilt disease evaluation plot as we had entries in this planting from both the University of Minnesota and University of Wisconsin potato breeding and plant pathology programs. The warm summer resulted in one of the best seasons of annual flower trials we have had in many years. Hanging basket and shade trials were particularly popular with area gardeners.

We hosted several tours and field days this summer. Our annual Horticulture Day Tour was the best attended in many years. We also hosted the Minnesota Fruit and Vegetable Growers Association tour in August. Growers from the Northland College Specialty Crops Management Program and the Manitoba Strawberry Growers Association also attended. Altogether over 60 growers attended this tour. Tours with several other gardening groups also occurred. Collectively these groups represent diverse horticultural interests. It is gratifying to host these groups, share our program, answer questions, and visit with them about their horticulture interests.

SHORELAND VEGETATION AND LANDSCAPE

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The University of Minnesota Extension Shoreland Education Program reached over 300 workshop participants in over 20 counties in Minnesota this past season with our Shoreland Volunteer, Shoreland Revegetation, and Aquatic Plant Identification workshops. In addition, shoreland restoration projects (done in collaboration with Soil and Water Conservation Districts, Minnesota DNR, and Ramsey Washington Metro Watershed District) were installed on over 30,000 square feet of shoreline. These can serve as demonstration sites for others interested in the techniques, appearance, and other details of the restoration process.

In response to the interest expressed by our workshop participants, lake associations and other agencies and organizations, we will be offering four new workshops in the upcoming 2004 season. ***Curly-leaf Pondweed***, an invasive exotic aquatic plant spreading to lakes in Minnesota, will be the focus of one of our new workshops. ***Shoreland Project Maintenance*** workshops will take participants to already established shoreland restoration sites to view and discuss project successes and maintenance challenges. ***Wetland Plant Identification*** will provide participants with hands-on experience in using plant keys to identify common wetland plants and plant families, a skill especially helpful to those restoring their shore. Finally, an abbreviated version of the Shoreland Revegetation Series will be offered in a one-day ***Introduction to Shoreland Revegetation*** workshop. Detailed information on these and other water-quality related workshops will soon be available on: http://www.extension.umn.edu/water/shore/.

SILVICULTURE

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Mixed-species red pine and white pine forests were common in the pre-euro-settlement forests of the Lake States. Over exploitation, wildfire prevention, land conversion of forests to agriculture and more recently rural development has reduced the area occupied by natural pine forests in Minnesota. Red pine, however, has been the most commonly planted tree species in Minnesota for the past 30 years. These maturing plantations present and opportunity for white pine establishment in the understory and the development of mixed-species stands.

Amy Harder, a graduate student in the Department of Forest Resources, Tim O'Brien, Jim Lind, Susan Marshall, and myself have been busy this summer establishing plantings of white pine beneath a 41 yr-old red pine plantation thinned to a range of densities. We also planted white pine beneath our Norway spruce and balsam fir plantations and a hardwood stand harvested in 2002.

We are monitoring the growing conditions, in terms of available light, temperature and competition, of these white pine seedlings. We are also measuring height and diameter growth and monitoring survival. In addition, we are protecting these seedlings from deer browse. During the Society of American Foresters National meeting last month, Amy presented a poster describing our work and was awarded second place for the quality of her poster entitled "Restoration of Mixed-Species Red and White Pine Stands: Establishment of a Red Pine-White Pine Shelterwood".

Data loggers used to monitor air and soil temperatures and the relative humidity for the white pine plantings.

TOURISM AND ECONOMIC DEVELOPMENT

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My work in 2003 has been focused on sustainable tourism development from a few different angles. One of them was my work as an organizer for an event in Grand Rapids, on Sep 27-28, 2003 called Goods from the Woods. This event was based on a goal of diversifying and/or enhancing the use of local forests for "special forest products." Special forest products are any materials or products that come from the forest generally excluding large scale industrial products. The Grand Rapids area economy is intertwined with the forest based resource as it is the foundation of the paper, timber, and tourism industries. As these industries change, it is becoming evident that a more diversified economic base would strengthen the local economy. Still looking at the existing resources, special forest products offer another way to use them. There is a great deal of entrepreneurial activity in the special forest products industry this project sought to strengthen those businesses and their networks, teach sustainable harvesting methods, as well as create a marketplace where many of these businesses could sell their products and the public could learn more about the industry as well as purchase unique items from this area. The event consisted of a day of workshops on sustainable harvest, small business management, and master class instruction. The second day was a marketplace with vendors, exhibitors, music, and food. Over 2000 visitors attended the marketplace, which had 120 exhibitors. In terms of tourism, this event has the potential to become an annual signature event that would enhance tourism in late September when visitation usually starts to decline. Goods from the Woods also has the potential to "brand" the Grand Rapids Area as a place to buy and learn about special forest products. Plans are now being made for the Goods from the Woods 2004 (September 18-19). For more information about this project, you may go to the website www.specialforestproducts.com.

Other work I was involved with was my ongoing meetings with community groups to talk about sustainable community tourism development. To learn more about Community Tourism Development, you may look at the Tourism Center website at www.tourism.umn.edu. Another interesting activity this year was when I taught an "Introduction to Tourism" course and gave a presentation on tourism marketing at the American Indian Alaska Native Tourism Association Conference.

TREE IMPROVEMENT

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Managing Hybrid Aspen Stands

Hybrid aspen is the result of crossing our native trembling aspen with European aspen. Many of these crosses result in seedlings that grow faster than either of their parents which make them ideal candidates for increasing forest productivity, or potentially as carbon credits in a global trading network. Recently I had the opportunity to visit a number of hybrid aspen plantations both on forested sites and on sites where intensive management had been used. Figure 1 shows an 11-year-old hybrid aspen stand near Grand Rapids that was established on a previously forested site. These trees are uniformly distributed throughout the site and are growing quite well despite last summers' drought. On these previously forested sites vegetative competition can be fierce because the site preparation prior to planting is often the only form of competition control these sites receive. However, if the distribution of seedlings does not meet a minimum guideline then one option for the site is to shear the remaining seedlings and let the root suckers regenerate the stand. This is possible because hybrid aspen, like trembling aspen, does regenerate from root suckers after harvesting (Figure 2). The last site I visited was near Alexandria, MN where a five-year-old hybrid aspen plantation had received intensive vegetation management since it was established (Figure 3). This is an example of tree farming and indicates what is possible when the vegetation is controlled and the seedlings receive optimal growth conditions.

11-year-old hybrid aspen stand on previously forested site.

Five year old intensively managed hybrid aspen stand.

Hybrid aspen stand 5 years after shearing.

NEWS FROM NORTH CENTRAL

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Records from Art Elling, weather observer at the USDA Forestry Sciences Laboratory in Grand Rapids, indicate the growing season officially ended with the first fall frost (30°F) on September 29th. The frost free period of 148 days (5/1 9/28) was the second longest growing season recorded at this station. This frost didn't necessarily end the growing season for some crops at some locations. However, a low of 21° recorded on October 1st finished off any surviving annual crops.

Spring arrived late at NCROC following a cold snowless winter that caused severe winter injury problems for most perennial crops. The growing season began with moderate temperatures and somewhat dryer than average conditions in April. May temperatures were about average and rainfall was slightly above average. The remainder of the growing season was hotter and much dryer than average. June-September rainfall was over 5 ½ inches short of normal. Above average temperatures and much lower rainfall resulted in slow pasture growth and a need for many farmers to supplement livestock on pasture. A 12% increase in growing degree-days for corn helped full season crops, however, corn became very drought stressed by late August.

Several years of low rainfall and limited snow pack has created stress problems for larger perennial plants such as trees. Insect damage on birch, oak, and other tree species is often a result of prolonged moisture stress resulting in reduced ability of trees to resist insect pests. The loss of numerous large, old oak trees will change the landscape of many areas in North Central Minnesota forever.

Change continues to occur at NCROC. As we deal with serious budget issues within the University and at NCROC, we need to be confident that we will emerge from these changes as a stronger more focused Research and Outreach Center. As one more item of change, I should inform our NCROC friends that unless something very unlikely occurs to change my mind, I will be resigning as NCROC Head in June 2004. I will save my farewell in the May issue of the North Central News.

Congratulations should go to the North Central School Alumni Reunion Committee who organized a very successful all class reunion this past July. Thanks to Tom Carpenter and his reunion crew for the hard work they do to keep our North Central School friends together and welcome at NCROC. I was on the East Coast during the reunion and regret that I was unable to greet those NCROC friends who attended the reunion. I know from Tom's comments in this newsletter that you had a good day. Please continue to know you are welcome at NCROC. Best wishes for a happy holiday season and an enjoyable and rewarding new year from your friends at NCROC.

EMPLOYEE NEWS

JOHN SUCHER RETIRES!

John Sucher, Farm Equipment Operator, retired on October 24th. John had worked on the NCROC farm crew for more than 20 years. John was a very dedicated employee and cared a lot about our center. He also was a big fan of Farmall/International tractors. John and his wife Ginny will be missed. We hope they continue to consider themselves part of our NCROC family and visit us often.

Upcoming Events

Beef Cow/Calf Days
February 2004 (TBA)
Location: North Central Research and Outreach Center

RESPONSE REQUESTED

If you wish to discontinue receiving North Central News, please respond by either sending an e-mail to johns986@umn.edu or calling NCROC at 218-327-4490.

ALUMNI NEWS

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The class reunion was held at North Central Research and Outreach Center on July 26, 2003 with 47 attending (class of 1940-1, 1942-1, 1943-1, 1944-1, 1945-1, 1946-1, 1947-2, 1948-2, 1949-3, 1950-1, 1951-2, 1953-1, 1954-1, 1962-7, 1964-1).

Walking and wagon tours were given of the campus. Old scrapbooks and pictures were displayed for everyone to enjoy looking through. Appetizers, almost enough to spoil supper, were served and enjoyed in air-conditioned comfort.

The meeting was held after supper. Election of officers was bypassed because everyone agreed to leave the committee as it is. With all the budget cuts that the University of Minnesota is facing, I proposed that I would like to see our group help out with the upkeep of the flag pole, the University of Minnesota flower bed, and the North Central School monument that is located by the greenhouse. I also proposed to help defray the cost of mailing the North Central News on the years we have a reunion. Both were voted on and okayed by those attending. In the spring of 2004, Jim Dethlof, Lonnie Ross, and I will repaint the flag pole and University of Minnesota flower bed, and clean up the monument. I am looking for a picture of the old school building with the flag pole in front, so that we can have it framed to place at the historical society at Central School in Grand Rapids. It was decided at the meeting that the next reunion will be in June of 2006 (day to be announced) from 11:00am 3:00pm with appetizers and socializing.

May you all be blessed with good health!

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